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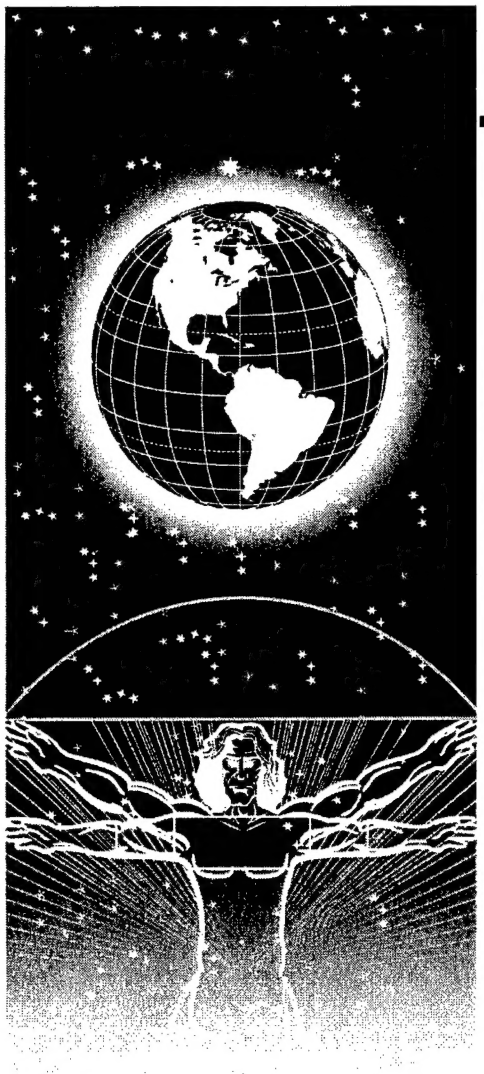

UNITED STATES AIR FORCE
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Preliminary Health Risk Assessment, Vladivostok Humanitarian Assistance Ecology Project

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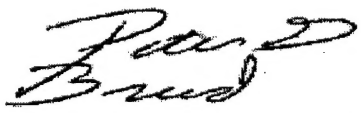

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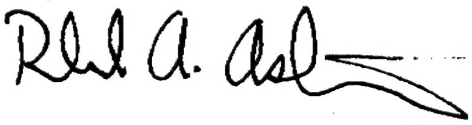

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13. ABSTRACT *(Maximum 200 words)*

The United States Department of Defense is actively involved in a joint ecology project with key health officials in Far East Russia (RFE). As an extension of a Department of State (DOS) humanitarian assistance program that began in 1995, the Department of Defense's Pacific Command (PACOM) has become the lead agency in developing and executing programs to team with Russia counterparts and address environmental and medical issues. This Preliminary Health Risk Assessment conducted jointly by PACOM and Russian Department of Health (DOH) personnel in 1999, was the first major project to support the established ecology goals. The project was designed to focus on quantifying the exposure of children to lead in six kindergartens representative of the kindergarten system. Samples were collected from air, water, soil, painted surfaces, dust, and blood to address the potential expsoure impact from a variety of media. The joint service PACOM team divided sample collection and analysis responsibilities and each member was paired with Russia experts for data collection.
A total of 1255 samples were collected to provide adeaquate data to identify sources of lead as well as estimate the potential exposures to children. Samples for soil, breathing air, ambient air, surfaces, dust, and water were examined as sources of environmental lead while the blood -lead results were used to determine actual exposure to lead. The collective data,indicates the primary source for lead exposure in this study is the paint used in the kindergartens and in the homes. This technical report summaries our sampling efforts and results as well as recommendations developed to control and reduce lead exposures to children in the Vladivostok area.

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EXECUTIVE SUMMARY

A tri-service Department of Defense scientific/medical contingent is actively involved in a joint "ecology" project with key health officials in Far East Russia (RFE). As an extension of a Department of State (DOS) humanitarian assistance program that began in 1995, the Pacific Command (PACOM) became the lead agency in developing and executing cooperative programs with Russian counterparts to address environmental and medical issues. This Preliminary Health Risk Assessment by PACOM and Russian Department of Health (DOH) personnel in 1999, was the first major project to support the established ecology goals.

This health assessment project focused on several areas in and around Vladivostok where the DOH believed the population was at an elevated risk from environmental exposures. Of particular concern, was quantifying lead exposure to children in their kindergarten system. Collecting lead exposure data from a variety of media was recognized as a project that could be addressed by a joint team. The PACOM team provided analytical support, training, and aided in the interpretation of data generated during the project.

The project scope included mini exposure assessments at six kindergartens located in Vladivostok, Russia. Samples were collected from air, water, soil, painted surfaces, dust, and blood. The joint service PACOM team divided sample collection and analysis responsibilities into subteams and each US member was paired with their Russia counterparts. Initially, the Russian team selected six kindergartens for evaluation during the study period from 28 August to 7 September 1999. Blood testing could not be accomplished at two of the locations. Therefore, while environmental samples were collected at all six of the original locations, blood samples were collected at four of the original schools as well as two alternate schools. Sampling and screening of the children and their schools occurred during normal school hours.

A total of 1255 samples were collected to provide a comprehensive picture of potential lead sources and actual exposure to children attending the schools. Environmental samples for soil, breathing air, ambient air, surfaces, dust, and water were examined as sources of lead while the blood lead results were used to determine actual exposure to lead. Results indicate that lead is present in many painted surfaces and in the soils in and around the school grounds. Water and air sampling results indicate that these media do not contain lead in the areas sampled. Blood testing showed that 27% of kindergarten children have blood lead level above the Russian standard of 8 μg/dl.

The primary source for lead exposure in this study is thought to originate in paint used in the kindergartens and in the homes. Recommendations to control this exposure were developed and are being implemented in Vladivostok. These recommendations include (1) developing regulations to control the production and importation of paints containing lead, (2) ensuring all lead containing painted surfaces are abated or well maintained, (3) replacing contaminated soils on playgrounds with soils from lead-free sources, and (4) instituting clinical management of children with elevated blood levels.

Potentially dangerous lead exposure from paint is a global issue that can easily and effectively be managed when adequate resources are available. By making resources available, PACOM demonstrated that local health experts can effectively minimize lead exposures and develop strategic plans to reduce their environmental levels of lead. Through synergistic joint-team ecology initiatives, members of the Air Force, Army and Navy scientific communities can share unique expertise and capabilities to conduct projects that provide real health benefits to populations that until recently seemed out-of reach.

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1.0 INTRODUCTION

This humanitarian assistance initiative is an extension of a Department of State (DOS) program that began in 1995 when DOS allocated $4.5 M for the transport of excess medical equipment to Russia Far East (RFE). This DOS mission, entitled Operation Provide Hope, was completed in April, 1999 when a Pacific Command (PACOM) team completed maintenance and repairs to the original equipment. In 1998, PACOM designated the Pacific Air Forces (PACAF) Surgeon General (SG) as the executive agent for future medical humanitarian efforts to the RFE. PACAF/SG led site survey teams to Vladivostok in July and December 1998. The first visit resulted in the Department of Health (DOH) of Primorski Krai being identified as the central point of contact for medical humanitarian assistance for the RFE. During the second visit the DOH drafted, in conjunction with the Medical-Humanitarian Assistance Team (M-HAT), a non-binding document called the Protocol of Intent. This document described a five-year strategic plan that contained 18 initiatives in which medical assistance was requested. One of the 18 initiatives was termed the ecology project. This project was aimed at conducting health assessments of several areas in and around Vladivostok where the DOH believed the population was at higher risk from environmental exposures. DOH indicated serious health issues were likely to exist to the extent that regional public health could be implicated. The intent of the RFE Ecology Project is to establish a long-term effort to assess the community environmental health concerns and provide information on community action plans. During a subsequent PACOM team visit in June 1999, the Protocol of Intent was amended reducing the number of initiatives from 18 to 5 with the Ecology Project being ranked the second highest priority behind medical equipment transfer.

2.0 BACKGROUND

In June 1999, a PACOM team visited RFE to scope the Ecology Project. Both the Russian and American sides established teams that would work together to achieve the objectives of the Ecology Project. The Russian team consisted of representatives from the DOH (overall point of contact), the Vladivostok State Medical University (point of contact for the ecology project), and Primorski Krai State Department of Epidemiological Surveillance (SDES). The American ecology project team consisted of representatives from the United States Air Force's Detachment 3, Air Force Institute for Environment, Safety, and Occupational Risk Analysis (Det 3, AFIERA), Kadena AB, Japan, the United States Army Center for Health Promotion and Preventive Medicine Pacific (CHPPM-PAC), Camp Zama, Japan, and the United States Navy Environment and Preventive Medicine Unit - 6 (NEPMU-6), Pearl Harbor Hawaii.

Based on the Russian's team public health priorities and the capabilities of the joint service health risk assessment team, it was evident that quantifying the exposure of children to lead in their kindergarten system was a high priority issue that could be addressed by the joint team.

The two sides agreed on the general scope of a project to characterize the exposure of kindergarten children to lead in six of the regions 100 plus kindergartens. The general framework called for samples to be collected from air, water, soil, painted surfaces, dust, and blood. Food was considered for evaluation but, after further review, it was decided that food would not be included as part of the exposure evaluation because of difficulties in analyzing food samples on-site and bringing samples out of the country for laboratory analysis.

The joint service team divided up responsibilities in each of the areas to be investigated. CHPPM-PAC was responsible for all activities associated with quantifying lead exposure for both personal breathing and ambient air. Det 3, AFIERA was responsible for all activities associated with quantifying lead exposure from soil, painted surfaces, and dust. NEPMU-6 was responsible for all activities associated with quantifying lead exposure from water and training the Russian team on the procedures screening the blood lead levels using the Lead Care instrument.

Initially, the Russian team selected six kindergartens (Numbers 109, 113, 132, 138, 141, and 162) for evaluation during the study period from 28 August to 7 September 1999. For various reasons, blood testing could not be accomplished at two of the locations (Number 113 and 138). The decision was made to go ahead and collect environmental samples at all six of the original locations and add to other schools (Numbers 18 and 169) for blood sampling only. Sampling and screening of the schools occurred during normal school hours. A typical schedule of the children's activities is shown in Table 1.

TABLE 1. Typical Daily Schedule of School Children

Time	Activity
0700-0830	Arrival
0900-0910	Exercise in playroom
0910-0930	Breakfast
0930-1030	Classroom
1030-1200	Walking/Play
1200-1215	Back to room
1215-1230	Lunch
1230-1500	Nap
1530-1700	Play outside
1700-1730	Dinner
1800-1830	Pickup

3.0 PROJECT OBJECTIVES

The objective of this short-term, multi-site project was to as accurately as possible, given the constraints on sample transport and on-site analytical capability, quantify the exposure of kindergarten children to lead by:

- Sampling and analyzing soil on-site from kindergarten properties to determine the lead content and compare results to the U.S. Department of Housing and Urban Development (HUD) and Russian guidelines for acceptable lead content in soils.

- Sampling and analyzing water on-site from the kindergartens and the source water to quantify lead content and compare results to the U.S. Environmental Protection Agency (EPA) and Russian guidelines for acceptable lead content in water. As feasible, screen water supplies at the homes of children with elevated blood lead levels.

- Conducting ambient air particulate monitoring, using portable particulate (PM-10) monitors to quantify and evaluate potential lead exposures from this media and compare results to the U.S. EPA and Russian guidelines for acceptable lead content in air.

- Conducting ambient air lead monitoring, using portable Total Suspended Particle (TSP) high volume air monitors to quantify and evaluate potential lead exposures from this media and compare results to the U.S. EPA and Russian guidelines for acceptable lead content in air.

- Conducting breathing zone sampling using portable low volume personal air monitors to examine the potential for expectant mothers to routinely breath lead contaminated air to assess lead burden prior to birth.

- Conducting dust sampling and on-site screening in the kindergartens to quantify and evaluate potential lead exposures and compare results to the U.S. HUD and Russian guidelines for acceptable lead content in dust.

- Conducting surface testing to identify lead-based paint in the kindergartens, on playgrounds, and on playground equipment to quantify and evaluate potential lead exposures from this media and compare results to the U.S. HUD and Russian guidelines for acceptable lead content in paint.

- Conducting blood testing of select kindergarten children to determine blood-lead concentrations and compare the results to the U.S. EPA and Russian action levels as a final determinate on exposures of kindergarten children to lead.

- Performing a screen of lead sources in the homes of children with elevated blood lead levels.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Soil/Bulk Samples

4.1.1 Sampling/Analytical Equipment

Soil and bulk paint samples were screened for lead on-site using a Niton X-Ray Fluorescence (XRF) Instrument, Model 700, Unit number U9152509LY. In addition, nine percent of the soil samples were brought back by the U.S. team and analyzed in the Det 3 AFIERA analytical laboratory at Kadena AB, Japan.

4.1.2 Sampling Design

There were a total of six kindergartens selected by the Russian team for sampling as well as the play areas near twenty-two homes. The Russian team, based on blood-lead testing results, also selected the homes. The Russian team developed a detailed sampling grid for each kindergarten, while the samples collected at the homes were random samples from the play areas adjacent to the home. At least 300 cubic centimeters (10 cm^2 x 3 cm) of soil were collected from each sample site and brought to the SDES building for analysis in accordance with the Niton User's Guide. From 24 to 40 samples were collected from each of the kindergartens and one sample was collected from each of the homes. Two bulk paint chip samples were also collected and brought back for analysis to confirm the Niton XRF readings.

4.1.3 Sampling Methodology

The Russian team developed a sampling grid for soil sampling at the kindergartens and collected the samples prior too and during the visit by the U.S. team members. Russian team members also completed sample collection at the homes. Samples were collected using a spatula and consisted of at least 300 cubic centimeters of soil removed from the sample site and placed into plastic bags that were labeled [1].

4.1.4 Analytical Methods

All samples were analyzed in plastic bags provided by the Russian team or ziploc® bags provided by the U.S. team members. The concentration of lead and 13 other metals (Arsenic, Molybdenum, Zirconium, Strontium, Rubidium, Mercury, Zinc, Copper, Nickel, Cobalt, Iron, Manganese, and Chromium) were directly measured using x-ray fluorescence in accordance with EPA Method 6200 for Field Portable X-ray Fluorescence [2] and the Niton User's Guide Chapter 3 for Analyzing Bulk Samples [1]. All analysis was done under the direct supervision of licensed operators from Det 3, AFIERA. Seventeen "split" samples were hand carried to the Det 3, AFIERA, Analytical Laboratory and analyzed for total lead in accordance with EPA Method SW 846-7420 [3]. Lead was extracted from the soils using glacial acetic acid and sodium hydroxide and then analyzed by inductively coupled plasma atomic-absorption spectroscopy. Four of these samples were also analyzed for soluble lead using EPA Method SW846-1311 [4],

Toxicity Characteristic Leachate Procedure (TCLP) with Atomic Adsorption/Inductively Coupled Plasma.

4.1.5 Data Collection and Sample Handling

Samples were homogenized within the plastic bags and large pieces of organic matter (e.g., twigs and grass) were excluded. The samples were then analyzed on-site as they were made available. Samples were assigned a tracking number in the field and tracked using field logbooks. Results were reported by analyte results, sampling site identifier, sample number, and date collected. Field sheets were completed for each sample transported to the laboratory for analysis. All samples undergoing laboratory confirmation analysis were hand-carried to Det 3, AFIERA Analytical Laboratory.

4.1.6 Sampling Quality Assurance/Quality Control (QA/QC) and Data Acceptance Criteria

To ensure the accuracy of soil analysis, the following procedures as indicated by Niton User's Guide were followed:

4.1.6.1 Calibration Procedure: Niton calibration was performed according to manufacturer's instruction and, at a minimum, included calibration at the start of each work day and once every two hours of operation.

4.1.6.2 Chain of Custody: Chain of custody forms were initiated for all samples delivered for laboratory analysis.

4.1.6.3 Blanks: Soils certified as lead-free were not available to serve as blanks for Niton XRF analysis, however "split" samples were used to confirm the accuracy of the Niton XRF.

4.1.6.4 Data Validation: In addition to the calibration procedures described in section 4.1.6.1, 9% of the samples collected were "split" and underwent complete laboratory analysis following standard procedures.

4.1.7 Analytical QA/QC

Samples brought back to the laboratory for analysis were analyzed in accordance with the standard Det 3, AFIERA Analytical Division QA/QC procedures [5]. Each set of samples were run in conjunction with a commercial laboratory spike. Analytical variance from the known spike sample would have invalidated the results of the sample run.

4.1.8 Data Evaluation

To determine the potential health effects due to lead in the soil, data was evaluated by comparison to the United States Environmental Protection Agency (U.S. EPA) action levels [6] and the Russian background soil reference values [7]. The U.S. EPA has adopted the United States Department of Housing and Urban Development's (HUD) guidance on acceptable soil

contamination levels [8]. For areas that may involve contact with children, such as playgrounds and near housing or schools, the acceptable level of lead in soil is less than 400 ppm [8]. For soil contamination in the range of 400 to 2000 ppm, further evaluation and physical exposure-reduction activities are appropriate [8]. Children, parents, and care providers should be educated on methods to minimize the contact and risk of inhalation and ingestion of these soils. For soil containing greater than 2000 ppm, the EPA recommends removing or permanently covering these soils [6].

The Russian ecological level of concern is established by comparing sample results to levels normally found in similar soil types. During this survey, Russian team members identified 40 ppm as the level of concern while all samples that exceeded 100 ppm were flagged as samples of particularly high concern.

4.2 Water Samples

4.2.1 Sampling/Analytical Equipment

Water samples were analyzed on-site using a Hach Drel 2000 Portable Water Analysis kit.

4.2.2 Sampling Design

Sampling efforts were designed to identify the lead concentrations in both the kindergartens and the reservoir water that supplies the kindergartens. Four to 11 samples, for a total of 43 samples were collected from the 6 kindergartens while 12 samples were collected from the Artem, Bogatinskoe, and Sedanka reservoirs. In addition, 42 samples were collected from the homes of children identified as having elevated blood-lead levels. The required minimum sample volume was 100 milliliters which was to be collected as a "first draw" sample. All samples were collected by Russian team members using their own protocol and brought to the SDES building for analysis. Sample results were used to indicate if drinking water is a primary route of concern for lead exposure to the children.

4.2.3 Sampling Methodology

The Russian team selected the kindergartens and reservoir sampling locations and collected all samples during the visit by U.S. team members. The sampling protocol called for 1 liter "first-draw" samples into bottles that had been acid rinsed, however samples were collected in a variety of bottles, some of which had not been prerinsed.

4.2.4 Analytical Methods

All samples were analyzed using the Hach LeadTrak Fast Column Extraction Method 8317 [9]. Samples were prepared using reagent packets and extraction procedures. The lead concentrations were directly measured using the Hach's internal colorimeter. The U.S. team members initially analyzed samples while the Russian team members gained proficiency with the Hach. Once proficient, the Russia team members completed most of the remaining analyses.

4.2.5 Data Collection and Sample Handling

Samples were analyzed on-site as they were made available. Samples were assigned a tracking number in the field and tracked using field logbooks. Results were reported by analyte result, sampling site identifier, sample number, and date collected.

4.2.6 Sampling Quality Assurance/Quality Control (QA/QC) and Data Acceptance Criteria

To ensure the quality of water analysis, the following procedures as indicated by Hach Method 8317 were followed [9]:

4.2.6.1 Calibration procedure: The Hach Drel 2000 is self-calibrating once the LeadTrak program is selected. Each day operators verified that the LeadTrak program calibrated its lamp to emit a wavelength at 477nm. Standards, provided as part of the kit, were analyzed every 10^{th} sample to ensure the unit was still calibrated.

4.2.6.2 Chain of Custody: Chain of custody forms were not used for these samples. Sample collectors delivered samples directly to the team after collection.

4.2.6.3 Blanks: Daily analysis of lead-free water was conducted to verify the accuracy of the Hach kit.

4.2.7 Data Evaluation

To determine the potential health effects due to lead in the water, sampling data was compared to the World Health Organization action level of 10 μg/L [10].

4.3 Air Samples

4.3.1 General Area

4.3.1.1 Sampling/Analytical Equipment: Total Suspended Particulate samples were collected using Portable Total Suspended Solids High Volume Air Samplers fitted with glass fiber filters. TSP samples were brought back by the U.S. team and analyzed in the CHPPM-PAC analytical laboratory at Camp Zama, Japan and the USACHPPM analytical laboratory at Aberdeen Proving Grounds, Maryland.

Particulate matter samples were collected using Airmetrics Minivol PM-10 (particles less than 10 microns) Portable Air Sampler with 47-mm quartz filters. PM-10 samples were brought back by the U.S. team and analyzed in the CHPPM-PAC analytical laboratory at Camp Zama, Japan and the USACHPPM analytical laboratory at Aberdeen Proving Grounds, Maryland.

4.3.1.2 Sampling Design: There were a total of six sampling sites selected by the Russian team. Sites were to be selected based on the following factors: vicinity of the childcare centers, known stationary sources in the area such as lead smelters, traffic conditions, local wind patterns

and terrain, and equipment security considerations. PM-10 air samplers were used as saturation monitors, non-reference method, to characterize spatial distribution of lead in PM-10 samples at a given site. A total of 15 PM-10 samples were collected from five kindergartens. TSP air samplers were used in accordance with the reference method for lead as provided in 40 CFR 50, Appendix B, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere [11]. A total of 21 TSP samples were collected from 5 kindergartens. Personal air samplers were used as breathing zone monitors, non-reference method, to determine the airborne lead intake of expectant mothers selected by the Russian team.

4.3.1.3 Sampling Methodology: High volume portable TSP samplers were operated in accordance with the reference method for lead as provided in 40 CFR 50, Appendix B, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere [11]. The sampler operated by drawing ambient air into a covered housing and through a glass fiber filter. The sampling period was 24 hours (plus or minus 1 hour). From two to six samples were collected at each of five facilities over the 8-day sampling event. In addition to lead, the samples were also tested for beryllium, cadmium, chromium, and manganese.

PM-10 portable air samplers are basically a pump with a programmable timer. In the particulate matter sampling mode, air was drawn by the pump through a size separator and then through a filter medium. The 10-mm particle separation was achieved by impacting particles 10 millimeters and smaller on a standard 47-mm quartz filter, which was then weighed to determine the concentration of respirable particles in air. The sampling period was 24 hours (plus or minus 1 hour). From two to four samples were collected at each of five facilities over the 8-day sampling event.

4.3.1.4 Analytical Methods: The samples collected on glass (TSP) or cellulose ester filters (Personal) were extracted from the filter paper by hot nitric acid and then analyzed by inductively coupled plasma atomic-emission spectroscopy in accordance with 40 CFR 50, Appendix G [12]. The USACHPPM Division of Laboratory Analysis analyzed the samples. The extraction and analysis were done according to 40 CFR 50, Appendix G [12]. The samples collected on the PM-10 quartz filters were weighed on a calibrated scale at the USACHPPM Division of Laboratory Analysis and the filter weight was compared to the pre-survey weight of the same filter. The difference in mass was the mass of the airborne particulate matter smaller than 10 mm that was collected in each sample volume.

4.3.1.5 Data Collection and Sample Handling: Filters were replaced daily and placed in individual filter holders. All filters were hand carried to CHPPM-PAC and mailed to the USACHPPM Division of Laboratory Analysis using FedEX. Filters were tracked in the field and in the laboratory by the filter number imprinted on each filter by the manufacturer. Results were reported by analyte result, sampling site identifier, sample number, and date collected. Field sheets were completed with the collection of each sample.

4.3.1.6 Sampling Quality Assurance/Quality Control (QA/QC) and Data Acceptance Criteria:

4.3.1.6.1 MiniVol PM-10 Samplers: To ensure the quality of PM-10 samples, the following procedures as indicated in the EPA Quality Assurance Handbook, Volume II, Section 2.11 [13] were followed:

4.3.1.6.1(a) Calibration Procedure: Calibration was performed according to the manufacturer's instruction.

4.3.1.6.1(b) Chain of Custody: Chain of custody forms were initiated with the collection of the sampling media and maintained through analysis.

4.3.1.6.1(c) Blanks: Fifteen- percent blanks (3 filters) were pre and post weighed with survey samples.

4.3.1.6.1(d) Data Validation: For a sample to be considered valid the flow rates must be plus or minus ten percent of five liters per minute and the samplers should operate for 24-hours, plus or minus one-hour. In addition, filters should be examined for tears, unusual wear, or change in color of particles. Torn or broken filters were not necessarily discarded if all pieces of the filter were present. If pieces of the filter were missing, then the filter was marked as an invalid sample. Any deviation was noted so that the sample could be qualified or invalidated.

4.3.1.6.1(e) Filter weighing procedures: Filters were weighed before and after sampling. The general procedure to obtain a PM-10 filter weight is to condition (dry) the filter for at least 24 hours, and then weigh the filter and record weight. The filter is then conditioned for six hours and re weighed. This procedure is repeated until consecutive filter weights are within 0.0005 grams of each other.

4.3.1.6.2 TSP Samplers: To ensure the quality of the metal samples, procedures described in the EPA Quality Assurance Handbook, Volume II, Section 2.8, Reference Method for the determination of Lead in Suspended Particulate Matter Collected from Ambient Air [14] were followed.

4.3.1.6.2(a) Calibration Procedure: A multipoint calibration was performed before the first sampling event and a single point flow rate check was performed before the second sampling event. If the flow rate deviated by more than seven percent during the single point flow rate check, then the sampler was recalibrated.

4.3.1.6.2(b) Chain of Custody: Chain of custody forms were initiated with the collection of the sampling media and maintained through analysis.

4.3.1.6.2(c) Blanks: Nineteen- percent blanks (4 filters) were analyzed to support this sampling event.

4.3.1.6.2(d) Data Validation: For the sample to be considered valid the flow rates must be within 1.1 m^3 per minute to 1.7 m^3 per minute and samplers should operate for 24-hours, plus or minus one-hour. Filters were examined for tears, unusual wear, or change in color of particles. Torn or broken filters were not necessarily discarded if all pieces of the filter were present. If pieces of the filter were missing, then the filter was marked as an invalid sample. Any deviation was noted so that the sample could be qualified or invalidated.

4.3.1.7 Analytical QA/QC: To ensure the quality of the TSP filter analysis , the standard USACHPPM Analysis Spectrometry Division QA/QC procedures [15] were used. The procedures are comprised of four elements described briefly below. Before sample preparation, a randomly selected sample filter was divided into two parts. The second part is referred to as the pre-digestion duplicate sample. The pre-digestion duplicate was subjected to identical procedures as the other sample filters. The results from the predigestion duplicate must be within 20 percentage of the original. Another sample filter, other than the filter selected for the pre-digestion duplicate, was divided into two parts. A known quantity of the substance to be measured, called a "spike", is added to the second part. This sample was called the pre-digestion spike, or the laboratory fortified matrix. This filter is submitted to the identical analytical procedures as the other sample filters. Results from the pre-digestion spike must be within 30 percent of the original filter added to the mass of the spike. After preparation, a sample, other than a sample from one of the two from the QA/QC elements discussed above, was divided into two parts. A spike of the substance measured was added to the sample. This sample is called post-digestion spike. Results from the post-digestion spike must be within 15 percent of the original filter added to the mass of the spike. The laboratory control sample is performed identically to the pre-digestion spike for analysis of the TSP or personal filters.

4.3.1.8 Data Evaluation: To determine health effects due to ambient air quality, data was evaluated by comparing to the U.S. National Ambient Air Quality Standards [16]. EPA's health-based national air quality standard for lead is 1.5 micrograms per cubic meter ($\mu g/m^3$) measured as an annual maximum quarterly average concentration. EPA's health-based national air quality standard for PM-10 is 50 $\mu g/m^3$ (measured as an annual mean) and 150 $\mu g/m^3$ [16] (measured as a daily concentration).

4.3.2 Personal Air Samples.

4.3.2.1 Sampling/Analytical Equipment: Personal air samples were collected using a series of SKC Low Volume Personal Air Samplers. Using cellulose ester filters, these units collect air samples that can be analyzed for a variety of metals including Lead, Cadmium, Beryllium, Chromium, and Manganese.

4.3.2.2 Sampling Design: A total of 31 samples were collected while monitoring 11 expectant mothers. Collectively, these results were used to indicate if the air is a primary route of lead exposure for children and developing fetuses.

4.3.2.3 Sampling Methodology: Low volume personal samplers were operated in accordance with the U.S. National Institute for Occupational Safety and Health guidelines [17].

The sampler operated by drawing ambient air at a rate of 3 L/minute into a covered housing and through a cellulose ester filter. Samplers were placed on expectant mothers for up to 24 hours with filter replacement every eight hours to prevent clogging and pump replacement every eight hours to ensure an adequate power supply. Eleven expectant mothers were monitored over the eight-day sampling event.

4.3.2.4 Analytical Methods: All the filters were analyzed for trace metals, including Pb, Cd, Cr, Be and Mn, by the National Institute of Occupational Safety and Health (NIOSH) Method 7300, 4th edition [18].

4.3.2.5 Data Collection and Sample Handling: The Russian team collected all samples and supporting data. An initial training on sampling procedures was provided. Samples were turned in by the Russian team for recording and analysis.

4.3.2.6 Sampling Quality Assurance/Quality Control (QA/QC) and Data Acceptance Criteria

4.3.2.6.1 Calibration Procedure: SKC high flow air sampling pumps were used for heavy metals sample collection, and were calibrated to a constant 3 LPM flow by using a Gilian Gilibrator. All pre and post calibration procedures were followed. A total of 1440 liters of air were passed through the sample collection media during the 8-hour sampling period for heavy metal sample collection.

4.3.2.6.2 Chain of Custody: Chain of custody forms were initiated with the collection of the sampling media and maintained through analysis.

4.3.2.6.3 Blanks: Field blanks were submitted to the environmental laboratory at a rate of 10 percent per total number of samples collected

4.3.2.6.4 Data Validation: For a sample to be considered valid the flow rate must be maintained at 3 liters per minute and be collected for 8 hours. In addition filters were examined for tears, unusual wear, or change in color of particles. Any deviation was noted so that the sample could be qualified or invalidated.

4.3.2.7 Analytical QA/QC: An acid blank and 10 μg/ml multi-element working standard were used by the laboratory in accordance with the NIOSH 7300 procedure [18].

4.3.2.8 Data Evaluation: The analytical results from the breathing zone air sampling were compared to both the U.S. Occupational Safety and Health Administration's (OSHA) 8-hour permissible exposure limits (PELs) [19] and the American Conference of Governmental Industrial Hygienist (ACGIH) threshold limit values (TLVs®) [20] for lead. Both PELs and TLVs® are 0.050 mg/m^3 and are legally accepted guidelines for airborne concentrations collected during routine work conditions under which it is believed that nearly all workers may be repeatedly exposed without adverse health effects. It is important to note that these recommended values are based on both industrial experience and human/animal experimental

studies. Generally, ACGIH TLVs® tend to be more stringent and are therefore used for reference by industrial hygienists when evaluating potential workplace health exposures. To assess potential health effects, the results of these breathing zone samples collected during this study were compared to the OSHA's threshold limit value of 50 micrograms per cubic meter [19].

4.4 Swipe Dust Samples

4.4.1 Sampling/Analytical Equipment

Dust swipe samples were analyzed on-site using a Niton X-Ray Fluorescence (XRF) Instrument, Model 700, Unit number U9152509LY using the Niton User's Guide Chapter 4 for Analyzing Thin Samples [21]. In addition, all dust swipe samples were brought back by the U.S. team and analyzed in the Det 3, AFIERA analytical laboratory at Kadena AB, Japan.

4.4.2 Sampling Design

Four of the six primary kindergarten selected by the Russian team were sampled for lead containing dust. The four kindergartens were selected randomly and sampling was conducted to assess the level of dust being tracked into the kindergartens or blown in through open windows. A total of 44 samples were collected to assess dust levels on floors, windowsills, window wells and play areas. Samples were collected from each site and brought to the SDES building for analysis. These samples were used as indicators of the lead content in the dust in and around the areas where children play.

4.4.3 Sampling Methodology

Dust swipe samples were collected using a damp (wetted with distilled water) 37-millimeter Whatman filter. The filter paper was taken directly from the original box at the location of sampling and saturated with distilled water. A 10-cm by 10-cm plastic template was placed over the sampling location and the filter paper was wiped using sequential "S" motions across the entire 100 square centimeter surface area in two perpendicular directions. Samples were collected in accordance with the U.S. Department of Housing and Urban Development Guidelines [8]. U.S. team members completed all dust sample collection. Each sample was then folded with the contaminated side of the filter closed inside the fold. Samples were placed one to a bag in ziploc® bags and delivered for analysis. Periodically blank swipe samples were collected by following the procedures mentioned above with the exception that the filter was placed immediately into the ziploc® bag after being saturated. The template was cleaned between every sampling location with distilled water.

4.4.4 Analytical Methods

All samples were analyzed in ziploc® bags provided by the U.S. team members. Lead concentrations were directly measured using x-ray fluorescence in accordance with the Niton User's Guide, Chapter 4 Analyzing Thin Samples [21]. All analysis was done by licensed

operators from Det 3, AFIERA. All 44 samples were hand carried to the Det 3, AFIERA, Analytical Laboratory and also analyzed for total lead in accordance with EPA Method SW 846-7420 [3]. Lead was extracted from the filters using glacial acetic acid and sodium hydroxide and then analyzed by inductively coupled plasma atomic-absorption spectroscopy.

4.4.5 Data Collection and Sample Handling

Samples were analyzed on-site as they were made available. All samples undergoing laboratory confirmation analysis were carried to Det 3, AFIERA. Samples were assigned a tracking number in the field and tracked using field logbooks. Results were reported by analyte result, sampling site identifier, sample number, surface tested, and date collected. Field sheets were completed for each sample transported to the laboratory for analysis.

4.4.6 Sampling Quality Assurance/Quality Control (QA/QC) and Data Acceptance Criteria

To ensure the quality of dust analysis, the following procedures as indicated by Niton User's Guide [21] were followed:

4.4.6.1 Calibration Procedure: Niton calibration was performed according to manufacturer's instruction and, at a minimum, included calibration at the start of each work day and once every two hours of operation.

4.4.6.2 Chain of Custody: Chain of custody forms were initiated for all samples being delivered for laboratory analysis.

4.4.6.3 Data Validation: In addition to the calibration procedures described in section 4.4.6.1, all samples were subjected to complete laboratory analysis following standard procedures.

4.4.7 Analytical QA/QC

To ensure the quality of the analysis , the standard USAF Det 3, AFIERA Analytical Division QA/QC procedures [5] were used. Each set of lead samples is run in conjunction with a commercial laboratory spike. Analytical variance from the known spike sample invalidates the results of the sample run.

4.4.8 Data Evaluation

To determine the potential health effects due to lead dust in the kindergartens, data was evaluated by comparison to the U.S. EPA clearance guidelines developed by the Department of Housing and Urban Development. The United States Environmental Protection Agency (EPA) established lead dust clearance levels of 50 ug/ft^2 (0.538 mg/m^2) for floors, 250 ug/ft^2 (2.691 mg/m^2) for window sills, 800 ug/ft^2 (8.611 mg/m2) for window wells. These standards are listed in 40 CFR Part 475 [22] and apply directly to lead removal projects. If the facility has levels exceeding these standards, it must be cleaned again prior to being occupied. Though not directly

applicable to existing facilities that have not been renovated, these standards can be used to identify areas that should receive special attention during routine housekeeping.

4.5 Surface Testing

4.5.1 Sampling/Analytical Equipment

Surfaces were screened for lead using a Niton X-Ray Fluorescence (XRF) Instrument, Model 309, Unit number U8184353LY in accordance with the Niton User's Guide, Chapter 5 Analyzing Lead Paint [23]. This unit allows direct measurement of lead concentration in surface layer without intrusive sampling.

4.5.2 Sampling Design

There were a total of six kindergartens selected by the Russian team for sampling as well as 22 homes of children with elevated blood lead levels. Surface testing was designed to identify the presence of lead-based paint on surfaces within the kindergartens and on playground equipment. Surface sampling was conducted in-place and destructive sampling was not required. Testing at each kindergarten ranged from 62 to 116 surfaces for a total of 542 kindergarten surfaces tested. Testing in the 22 homes ranged from three to ten surfaces each. These samples were used as indicators of the lead that children may come in contact with as they play on or near surfaces containing deteriorating paint.

4.5.3 Sampling Methodology

All surfaces were considered during testing because no historical paint use records were available. Surveyors completed representative testing on all surface types identified during walkthroughs of each facility. Testing at the kindergartens was completed primarily by U.S. team members with the assistance of Russian team members. U.S. team members in conjunction with Russian team members completed surface testing at the homes.

4.5.4 Analytical Methods

All samples were analyzed in place and the lead concentrations were directly measured using x-ray fluorescence in accordance with the Niton User's Guide, Chapter 5, Analyzing Lead Paint [23]. All analysis was done under the direct supervision of licensed operators from Det 3 AFIERA.

4.5.5 Data Collection and Sample Handling

Samples were analyzed in place therefore no collection was necessary. Samples were assigned a tracking number in the field and tracked using field logbooks. Results were reported by analyte result, sampling site identifier, sample number, surface tested, and surface color.

4.5.6 Sampling Quality Assurance/Quality Control (QA/QC) and Data Acceptance Criteria

To ensure the quality of surface analysis, the following procedures as indicated by Niton User's Guide were followed:

4.5.6.1 Calibration Procedure: Niton calibration was performed according to the manufacturer's instruction and, at a minimum, included calibration at the start of each work day and once every two hours of operation.

4.5.6.2 Standards: Commercially prepared field standards were used to verify the results of the XRF. At the start of each day and at least once every two hours, field standards were tested to ensure the XRF was not experiencing "drift." At no time during this survey did the XRF fail to accurately read the standards.

4.5.7 Data Evaluation

To determine the potential health effects due to lead in painted surfaces, data was evaluated by comparison to the HUD established surface paint limit of 1.0 mg/cm^2 [8]. Surface paint levels exceeding this level are considered to be lead-based paints and represent the potential for adverse human health affects.

4.6 Blood-Lead Screening

4.6.1 Sampling/Analytical Equipment

All blood samples were analyzed on-site using an ESA Lead Care Unit. This unit allows screening of a 50 µl blood sample to assist in identifying high-risk children.

4.6.2 Sampling Design

There were a total of six kindergartens selected by the Russian team for sampling. Due to limitations established by kindergarten administrators, only four of the six kindergartens are the same facilities that had the environmental media sampled. Children were randomly selected based on their availability when the testing teams arrived at the kindergartens. The total number of children screened was based on the available supplies for the ESA Lead Care equipment. The numbers of children tested at each kindergarten ranged from 22 to 46. A total of 203 children had their blood screened for lead. The blood-lead screening results served as the only indicator of actual lead up-take by children from the various environmental media.

4.6.3 Sampling Methodology

The Russian team determined which kindergartens were selected for screening and in conjunction with the kindergarten administrators and teachers, they selected which students were

tested. All samples were collected by Russian team members using the finger stick method in accordance with the ESA Lead Care Operations Manual [24].

4.6.4 Analytical Methods

All samples were analyzed using the ESA Lead Care kit and procedures were done in accordance with the Lead Care Operations Manual [24]. Analysis is based on the electrochemical properties of a 50-microliter sample.

4.6.5 Data Collection and Sample Handling

Samples were screened on-site immediately following collection. Samples were assigned a tracking number in the field and tracked using field logbooks. Results were reported by sampling site identifier, sample number, and result analyte.

4.6.6 Sampling Quality Assurance/Quality Control (QA/QC) and Data Acceptance Criteria

To ensure the quality of blood screening analysis, the ESA Lead Care standards were periodically run and results were compared to commercially established concentrations. The method is a field screening method. Analytical QA/QC procedures do not apply until confirmation venous samples are collected and analyzed in an accredited laboratory.

4.6.7 Data Evaluation

The results of blood-lead screening were compared to the U.S. EPA guideline value of 10 μg/dL [25] and the Russian guideline value of 8 μg/dL [26] to determine the impact environmental sources of lead may have on area children. These results were applied to identify children that had elevated blood-lead levels and have an elevated health-risk associated with lead uptake.

5.0 DISCUSSION OF RESULTS

5.1 Soil/Bulk Paint

Results from the soil and bulk paint testing are found in Appendix A. A total of 202 soil and 2 paint bulk samples were collected and analyzed using the Niton XRF. In addition, 19 samples (18 soil and 1 bulk paint) were randomly selected for duplicate analysis using laboratory procedures to confirm the Niton XRF readings. Generally, with two exceptions (samples V99S2107 and V99S2195), there was excellent agreement between the Niton XRF readings and the laboratory results (Table 2). Subsequent analysis of V992107 using the NITON resulted in six tests confirming lead concentrations less that 50 mg/kg. Subsequent analysis of V992195 was not possible because all available soil was used during the test for leachable lead. The discrepancy in the two samples is most likely due to the non-homogenous nature of the soil samples and the difference in the two testing procedures and does not indicate the Niton XRF readings were inaccurate.

TABLE 2. Comparison of Results From Niton XRF and Laboratory

Sample	NITON XRF (mg/kg)	Lab Result (mg/kg)
V99S2002	<42	<50
V99S2009	<41	<50
V99S2017	35	<50
V99S2019	<49	58
V99S2025	<50	<50
V99S2029	<44	<50
V99S2034	<36	<50
V99S2036.1	162	207
V99S2053	<38	58
V99S2064	118	123
V99S2079	113	160
V99S2087	<39	<50
V99S2107	194	<50
V99S2118	<41	<50
V99S2195	72	72
V99S2157	<32	<50
V99S2167	<31	<50
V99S2195	<42	623
V99C2300*	25,344	49,800

*Paint Chip (Niton XRF showed lead in the sample exceeded 5 mg/cm^2 and a screen of the sample using the Niton XRF indicated a lead concentration of 25,344 mg/kg)

Soil samples in the U.S. with lead concentrations exceeding 400 mg/kg would generate concern. Response actions would depend on the individual circumstances, but in areas where children may come in contact with the soil, some type of control action would occur for soils with levels ranging from 400 mg/kg to 2000 mg/kg [6]. Soil removal would occur anytime lead concentrations exceed 2000 mg/kg. The Russian team members indicated that 40 mg/kg would be considered their "normal" value and anything over 100 mg/kg [7] would get attention. A total of 65 soil samples exceeded the Russian normal value and there were an additional 49 samples where the Niton XRF detection limit was greater than 40 mg/kg (Table 3). It is possible that 114 of the 202 soil samples collected exceeded the Russian "normal" value for lead in soil. No soil samples exceeded the U.S. guideline value [6].

TABLE 3. General Summary of Soil and Paint Chip Testing

Total Samples Collected	# Samples Analyzed On-Site	# Samples Exceeding U.S. Guidelines [6]	# Samples Exceeding Russian Guidelines [7]
204	204	0 soil 2 paint chips	63 soil samples plus 50 with a detection limit above 40 mg/kg

Soil samples were collected at the following "strategic" locations: near roads where lead could be coming from the exhaust of cars using leaded gasoline, near buildings and entrances where leaded paint could be peeling and entering the soil, and in/around playground equipment where children frequent. Lead was found at most of the sites sampled (Table 4.)

TABLE 4. Summary of Soil and Paint Chip Testing Results by Facility and Sampling Location

				# Samples versus # Positive Samples for each Category			
Bldg #	# Samples	Range (mg/kg)	# Positive Samples[#]	Sandbox Samples	Other Playground Area Samples	Samples Near Buildings	Samples Near the Fence or Road
109	24	<27-42	2	20/2 (10%)	0 (0)	3/0 (0)	1/0 (0)
113	26	<39-118	12	15/4 (27%)	4/2 (50%)	4/4 (100%)	3/2 (67%)
132	31	<36-210	18	20/9 (45%)	0 (0)	6/6 (100%)	5/3 (60%)
138	26	<33-113	6	17/2 (12%)	0 (0)	5/2 (40%)	4/2 (50%)
141	40	<34-162	11	20/6 (30%)	11/3 (27%)	9/2 (22%)	0 (0)
162	33	<33-243	7	20/1 (5%)	3/1 (33%)	3/0 (0)	6/4 (67%)
Totals	180	<27-243	56	112/24 (21%)	18/6 (35%)	30/14 (47%)	19/11 (58%)
Paint Chips*	2	15616-25344	2				
Housing	22	<33-396	9				
	204		67				

*Paint chips collected from playground giraffe at school 109 to confirm Niton XRF readings
[#]One positive sample not listed in the categories to the right was located near a garbage pile

5.2 Water Samples

Complete results from the water testing are found in Appendix B. All quality assurance and quality control samples tested within acceptable limits and the data is considered valid. A total of 97 water samples were tested for lead and all were below the World Health Organization guideline value of 10 µg/l (Table 5) [10].

TABLE 5. Summary of Water Testing

Building #	# Total Samples	# Samples with Lead Detected	# Samples Exceeding World Health Guidelines
109	6	0	0
113	11	0	0
132	8	0	0
138	4	0	0
141	6	0	0
162	8	0	0
Housing	42	1 at 2 µg/L	0
Reservoir/Supply	12	0	0
Totals	97	1	0

5.3 Air Samples

5.3.1 General Area

Results from the general area air testing are found in Appendix C. All blank samples and analytical quality assurance and quality control samples tested within acceptable guidelines and the data is considered valid with the exception of one sample marked invalid as a result of equipment problems. Although several air samples were "screened" using the Niton XRF, all results reported below are from analysis of the samples brought back for laboratory testing. There was good agreement between the Niton XRF screening results and the laboratory testing results.

Over the 8-days of sampling, a total of 36 general air samples were collected (21 TSP and 15 PM-10). Although lead and particulates were detected, the concentrations did not exceed U.S. guideline values (Table 6) [16]. The PM-10 results demonstrated particulate levels that might exceed the U.S. annual guidance level of 50 µg/m [16] if the samples collected over the 8 days are representative of average annual values.

TABLE 6. General Area Air Sampling Summary

Bldg.	TSP Samples	TSP Range ($\mu g/m^3$)	PM 10 Samples	PM 10 Range ($\mu g/m^3$)	PM 10 Above Annual Mean Limit
109	0	--	4	51-67	3
113	6	0.049-0.14	0	--	--
132	3	0.082-0.15	3	40-59	1
138	4	0.054-0.18	2	52-78	2
141	6	0.054-0.15	2	43-76	1
162	2	0.038-0.039	4	10-42	0
Totals	21	0.038-0.18	15	10-78	7

5.3.2 Personal

Complete analytical results for the breathing zone monitoring of the eleven expectant mothers are found in Appendix C. A total of 31 air samples were collected while monitoring for up to 24 hours. Lead was not detected in any of the breathing zone samples (Table 7)

TABLE 7. Summary of Personal Air Lead Sampling

Total Samples Collected	Range of Results ($\mu g/m^3$)	# Samples Exceeding U.S. Guidelines [17]
31	<0.5-<49*	0

*Only one of the 31 samples had a detection limit of 49 $\mu g/m^3$ all other samples were less than 0.5 $\mu g/m^3$

5.4 Swipe Dust Samples

All results from the swipe sampling are found in Appendix D. The laboratory analyses confirmed the field analytical procedures and no discrepancies were noted. All blank samples tested negative for lead indicating that lead was not introduced during the sampling/analytical procedures. As shown in Table 8, only 2 of the 44 dust samples exhibited levels that exceeded recommended guideline values [22] and only 6 of the 44 samples had any detectable levels of lead (Table 9).

TABLE 8. General Summary of Dust Swipe Lead Samples

Total Samples Collected	# Samples Analyzed On-Site	# Samples Analyzed at an Off-Site Lab	# Samples Exceeding U.S. Guidelines [22]
44	44	44	2

TABLE 9. Lead Results for Dust Swipe Sampling by Facility and Sampling Location

Bldg. #	# Samples	Range ($\mu g/100\ cm^2$)	Positive Results	Window Sill Samples	Floor Samples	Window Well Samples	Samples from Other Surfaces	Results Exceeding U.S. Guidelines [22]
109	14	<10-16	3	6	6	0	2	0
113	14	<10-115	1	4	4	4	2	1 Win-Sill
141	9	<10-42	2	3	4	0	2	1 Floor
162	7	<10	0	3	4	0	0	0
Total	44		6	16	18	4	6	2

5.5 Surface Testing

Detailed results of the surface testing are found in Appendix E. All results were obtained using the Niton XRF and calibration runs were completed often during the testing and there were no indications of any problems. The Russian team selected the schools to be visited and teachers or directors at the kindergartens selected the rooms to be tested. Rooms that were most often used by children were the ones evaluated. Once in a room, the U.S. team members determined the surfaces to be evaluated. Each painted surface in each room that could be contacted by a child was tested. In addition to the schools, 22 homes of children with elevated blood lead levels were also tested. A total of 671 tests were performed and 119 of the surfaces exceeded the U.S guideline value (1 mg/cm^2) for lead (Table 10) [8].

TABLE 10. General Summary of Surface Testing

Total * Samples Collected	# Samples Analyzed On-Site	# Samples Exceeding U.S. Guidelines [8]
671	671	119

* Does not include 29 calibration "shots" done on-site

Painted surfaces containing trace to significant amounts of lead were found at all kindergarten locations on various materials (Table 11). Lead concentrations varied from non-detect to over 5 mg/cm^2. Approximately 14 percent of the surfaces tested above the U.S. guideline value [8].

TABLE 11. Surface Testing Lead Results by Facility

Bldg. #	Total # Samples	Range of Results (mg/cm^2)	# Results Exceeding U.S. Guidelines [8]	Materials Containing Lead-Based Paint
109	91	0.00 - >>5.00	18	Yellow Shelves, Desk Playhouse, and Playground Equip, Beige Rocking Horse, Red Toy Block and Baseboard, Green Toy Block and Playground Equip, Brown Baseboard, Blue Playground Equip
113	94	0.00 - 2.02	2	Orange Door Frame, Yellow Rocking Horse
132	62	0.00 - >>5.00	13	Orange Baseboard, Yellow Toy Block and Playground Equip, Blue Green and Beige Playground Equip
138	96	0.00 - >>5.00	7	Orange Baseboard, Yellow Toy Block, Pink Handrail, Blue Playground Equip, Green Bench
141	116	0.00 - >>5.00	17	Brown Baseboard Rocking Horse, Yellow Rocking Horse Toy Bus and Block, Bench, Stairs, Playground Equip, Orange Baseboard, Toy Truck, Table Blue Toy Block, Pink Stairs, Red Playground Equip
162	83	0.00 - >>5.00	21	Green Playground Equip, Bench and Toy Block Yellow Toy Block, Bench and Playground Equip, Red Toy Block, Orange Wood Cabinet
Total	542		78	

Lead was found on painted surfaces in all of the private residences visited. In 16 of the 22 residences, the lead concentration exceeded the U.S. guideline values (Table 12) [8]. Values ranged from non-detect to over 5 mg/cm^2. Typically, the lead was found in yellow paint on the floors and baseboards.

TABLE 12. Private Home Surface Testing Lead Results

Bldg. #	Total # Samples	Range of Results (mg/cm^2)	# Results Exceeding U.S. Guidelines [8]	Materials Containing Lead-Based Paint
147, Apt 52	5	0.04 - 3.73	2	Brown Floor
21/1, Apt 46	3	0.02 - 0.61	0	--
Mil City #18	6	0.01 - 1.14	1	Brown Baseboard
16, Apt 73	10	0.01 - 3.08	4	Orange Floor, Pink Door
6, Apt 65	8	0.00 - 1.32	3	Yellow Floor
19/2, Apt 52	5	0.01 - 1.29	1	--
40, Apt 29	6	0.05 - 3.14	3	Brown Baseboard
1a, Apt 53	7	0.14 - 3.72	3	Yellow Floor
3, Apt 85	5	0.03 - 2.05	3	Yellow Door Frame, Floor
44, Apt 28	8	0.00 - >>5.00	4	Orange Baseboard, Yellow Floor
53/1, Apt 20	6	0.00 - 0.91	0	--
26, Apt 118	6	0.00 - 1.17	2	Orange Floor, Yellow Floor
10, Apt 105	7	0.02 - 0.29	0	--
43, Apt 10	7	0.00 - >>5.00	2	Yellow Floor
26, Apt 72	3	0.00 - 0.61	0	--
5, Apt 22	6	0.02 - 3.62	1	Baseboard
15, Apt 123	5	0.09 - >>5.00	3	Yellow Baseboard, Yellow Floor
23, Apt 134	6	0.09 - 3.40	4	Yellow Floor, Orange Floor, Brown Baseboard
39, Apt 8	7	0.02 - 0.81	0	--
9, Apt 29	4	0.05 - 3.45	3	Yellow Floor, Yellow Closet
56, Apt 942	4	0.00 - 0.53	0	--
11, Apt 323	5	0.08 - 1.28	2	Yellow Baseboard, Yellow Floor
Total	129		41	

Overall, surfaces painted yellow were most often found to contain lead followed by those painted green and orange (Table 13). The table may be misleading in that the colors shown are the "surface" colors and for objects that have multiple coatings of paint the lead may not be found in the surface layer. The Niton XRF will indicate if it is detecting lead on the surface or in a deeper layer. When the Niton XRF indicated that the lead was in a deeper layer the U.S. team attempted to locate the color responsible but it was not always possible.

TABLE 13. Positive Surface Lead Testing Results by Color

	Yellow*	Green	Orange	Pink	Blue	Beige	Red	Brown	Totals
Schools									
- Inside Surfaces	2/1	0	9/3	1/0	0	0	1/0	2/1	
- Toys, Inside	12/10	8/6	2/2	0	1/1	1/0	2/2	1/0	
- Outside Surfaces	1/1	2/1	0	1/1	0	0	0	0	
- Playground Equipment	18/10	6/4	0	1/1	5/2	1/0	1/0	0	
Subtotals	33/22	16/11	11/5	3/2	6/3	2/0	4/2	3/1	78/46
Housing									
- Floors	14/9		7/0					3/1	
- Baseboards	5/3		1/0					4/0	
- Door/ Door Jamb	1/1			1/0					
- Closet Door									
Subtotals	20/13		8/0	1/0				7/1	36/14
Grand Total	53/35	16/11	19/5	4/2	6/3	2/0	4/2	10/2	114/60

*First number is the number of positive tests of that color over 1 mg/cm^2 and the second number is the number of positive readings that indicate lead in the surface layer. A total of 5 positive samples could not be attributed to a color.

Toy blocks constituted a significant number of the painted surfaces tested as the blocks were used frequently by the children, were often well worn, and could be placed in the children's mouth. Significant amounts of lead (>1 mg/cm^2) were found in many, but not all yellow and green blocks. Most of the other block colors did not contain significant levels of lead (Table 14)

TABLE 14. Summary of Lead Testing on Toy Blocks

	Yellow*	Green	Blue	Red	Pink	Orange	White
Number/Pos/Trace	35/6/18	30/8/8	26/1/4	25/2/6	2/0/1	1/0/0	1/0/0
%/%#	15/57	27/27	4/15	8/24	0/50	0/0	0/0

*First number is the number of tests of that color, next is the number of tests over 1 mg/cm^2 and the final number is the number of positive readings where trace amounts (i.e., .1-. 99 mg/cm^2) were found.

#First number is the percent of the samples with lead values exceeding 1 mg/cm^2 and the next number is the percent of samples where trace amounts (i.e., .1-. 99 mg/cm^2) were found.

The previous tables mentioned several different painted surfaces that contained lead. Following are photographs and brief discussions of typical lead sources. Figure 1 shows the baseboard in the 3-year old playroom at school 141 that had a lead concentration of 1.5 mg/cm^2 (sample V99C462). Figure 2 shows typical rocking horses seen at most of the kindergartens. They were generally painted yellow and a majority of the yellow paint tested positive for lead.

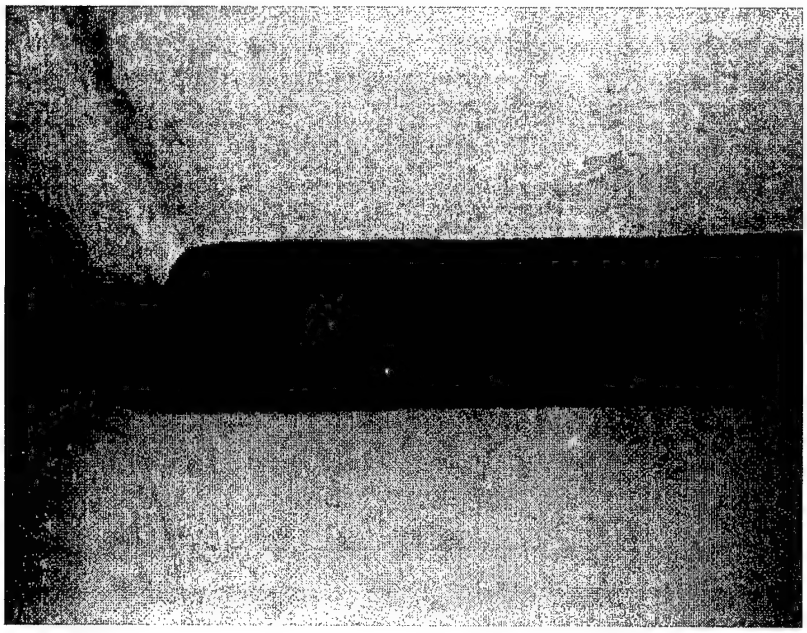

Figure 1. Brown/Orange Molding at School 141.

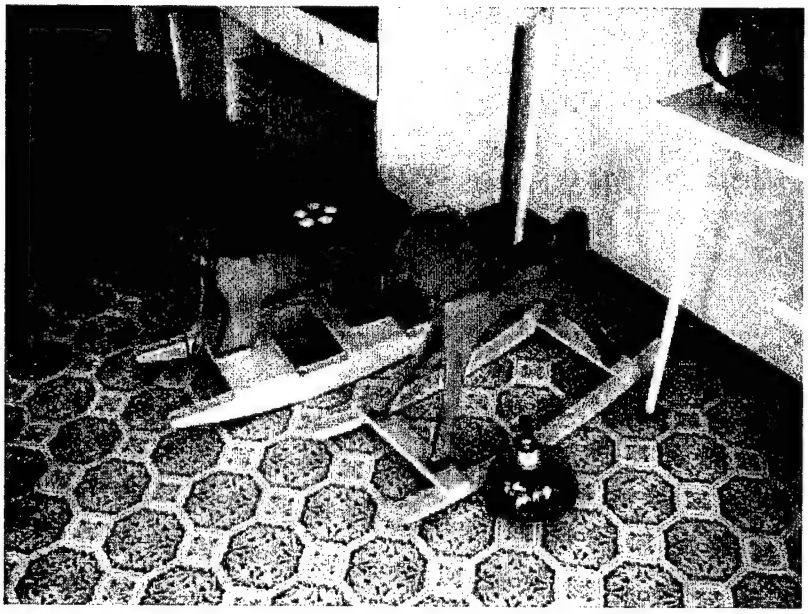

Figure 2. Yellow Rocking Horses at School 141.

The yellow paint shown (sample V99C5456) tested positive for lead at a level of 3.3 mg/cm^2. In addition, a dust wipe sample (V99D3040) was collected from the horse to see if lead could be "picked up" from normal contact with the play toy. The sample tested positive for lead at 42 µg/100 cm^2. Although the level of lead in the swipe sample may not be significant (i.e., does not exceed a standard), it does demonstrate that lead can be "picked up" from contact with the toy.

Figure 3 shows a table (sample V99C552) located in the 5-year old playroom where the paint tested positive for lead at a level of 4.2 mg/cm^2.

Figure 3. Orange Table at School 141.

Figure 4 shows a bench also located in the 5-year old playroom. The bench (sample V99C5528) exhibited a lead concentration exceeding 5 mg/cm^2. Although the Niton XRF reading indicated that the lead was present below the surface, only the yellow color could be seen.

Figure 4. Yellow Bench at School 141.

Figure 5 shows a multicolored playground ladder at School 141. The yellow painted surface (sample V99C5505) tested positive for lead at a level of 4.1 mg/cm^2. The Niton XRF suggested the lead was present 2 layers deep but only the yellow paint was observed in the worn areas.

Figure 5. Multicolored Playground Ladder at School 141.

Figure 6 shows the typical multicolored blocks found at all schools. Table 13 shows the breakout of lead content by color. The yellow and green blocks were the colors that most often contained lead of the seven different colors tested. Although green blocks had the highest percentage of blocks with lead concentrations exceeding 1 mg/cm^2, trace amounts (.1 to .99 mg/cm^2) of lead was found in 57 percent of the yellow blocks. School personnel were shown the blocks anytime lead levels were found that exceeded 1 mg/cm^2.

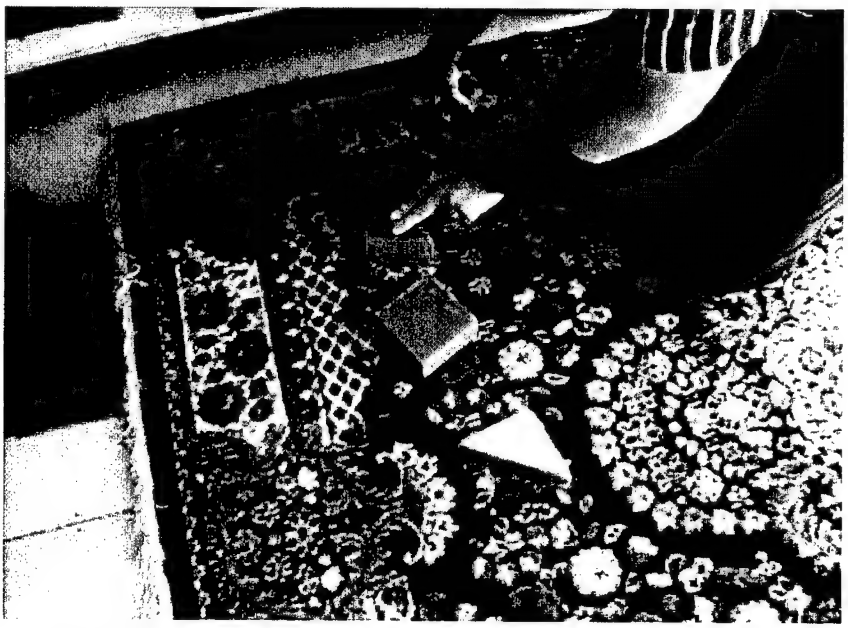

Figure 6. Typical Multicolored Blocks at All Schools.

Figure 7 shows a yellow playhouse at School 109. The yellow paint on the toy house (sample V99C5316) had a lead concentration of 1.3 mg/cm^2. The house was located in the 5-6 year old playroom. In the same room there were yellow shelves (sample V99C5317) that showed a lead concentration exceeding 5 mg/cm^2.

Figure 7. Yellow Playhouse at School 109

Figure 8 shows a tan door jam at School 113. The tan paint on the door jam (sample V99C5004) exhibited a lead concentration of 1.2 mg/cm^2. The Niton XRF indicated that the lead was located below the surface but no other color of paint could be identified. The door jam was freshly painted. Door jams are of special interest because of the wear the paint receives by opening and closing doors and people walking across them. Over time the paint will wear creating a fine dust. If lead is present it can then be easily transported.

Figure 8. Tan Door Jam at School

Figure 9 shows a sandbox at School 132. The yellow sandbox (sample V99C5251) tested positive for lead with a concentration of 4.1 mg/cm^2. As can be seen the box is used often and children come in direct contact with the lead containing paint. A soil sample (V99S2041) from a sandbox located at School 132 exhibited a lead concentration of 68 mg/kg. Also of note are the toy giraffes located in the background of the photo. See Figure 10 for a close-up.

Figure 9. Sandbox at School 132.

These types of toy giraffes were found at most of the kindergartens and were typically painted yellow. The yellow paint (sample V99C5240) shown tested positive for lead at a concentration exceeding 5 mg/cm^2. Children were observed climbing and playing on the giraffes and although the equipment was well maintained, the paint was peeling and flaking off. Samples (V99C2300 and 2301) of the flaking paint were collected from a giraffe at School 109 and brought back to the laboratory to confirm the high readings obtained from the Niton XRFs. These samples exhibited very high levels of lead exceeding 25,344 mg/kg. Play items such as these where the children come in contact often and the paint wears easily may represent a significant source of lead.

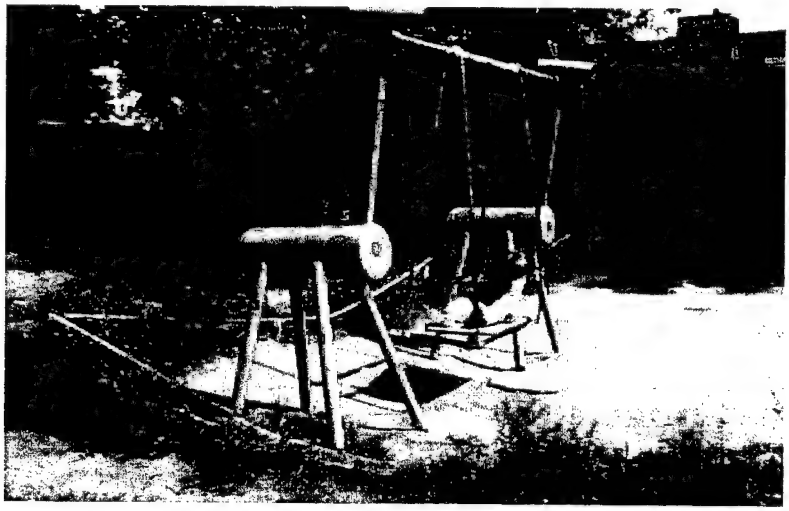

Figure 10. Playground Giraffes at School 132.

Figure 11 shows a multicolored merry-go round at School 162. The green and yellow paints (samples V99C5373 and V99C5374, respectively) contained significant levels of lead (greater than 5 mg/cm^2). It was difficult to tell if the green paint was actually the source of lead as the Niton XRF reading indicated the lead was located 2 layers deep and yellow paint was observed below the green. The equipment was worn and much of the paint had deteriorated. Also note the freshly painted yellow pole to the left of the person in the photo. This paint (sample V99C5364) was found to contain lead at a concentration of 2.0 mg/cm^2.

Figure 11. Multicolored Merry-go Rounds at School 162

Figure 12 shows a pink stair rail at School 138. One of the few examples of a color other than yellow that tested positive for lead. The pink handrail (sample V99C5180) showed a lead concentration of 1.6 mg/cm^2

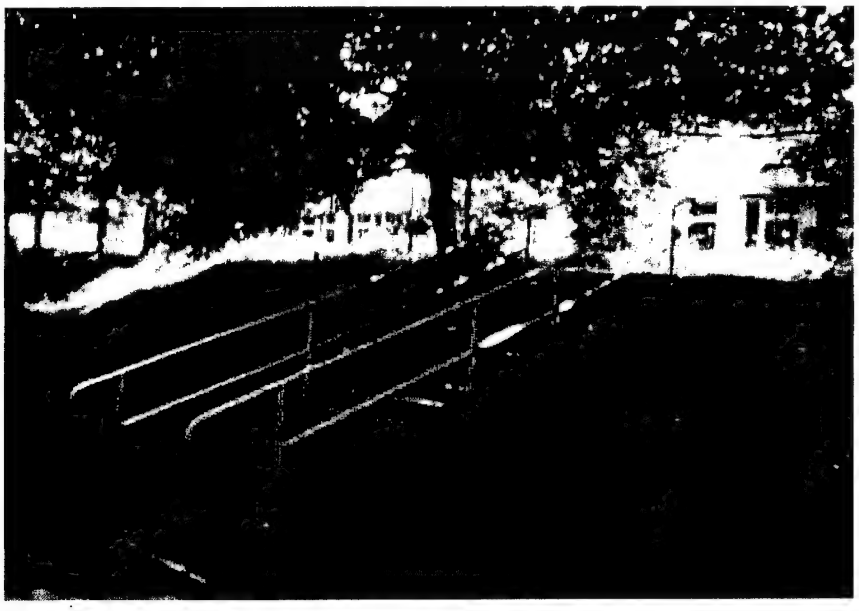

Figure 12. Pink Stair Rail at School 138.

5.6 Blood-Lead Screening

Detailed results from the blood lead testing are found in Appendix F. Blood samples (finger prick method) were taken from 203 children selected by the Russian team. Of the 203 children tested, 39 (19 percent) had blood lead levels that exceeded the U.S. standard of 10 μg/dl and 55 children (27 percent) had blood lead levels that exceeded the Russian standard of 8 μg/dl. Lead was found in the blood of children from each school varying in range from 0.2 to 28 μg/dl (Table 16). School 162 had the highest percentage of children test above the Russian standard (50 percent) and accounted for the highest blood level reading (28 μg/dl).

TABLE 15. Summary Results of Blood Lead Testing

Building Number	Total # of Children Sampled	Range (μg/dl)	Mean	Standard Deviation	% Exceeding U.S. Guidelines [25]	% Exceeding Russian Guidelines [26]
18	20	0.4-13.7	4.8	3.5	10.0	10.0
109	45	3.0-18.0	7.3	3.4	15.5	28.9
132	26	0.2-17.6	4.5	3.7	3.8	15.4
141	35	1.6-17.0	7.7	3.7	31.4	37.1
162	30	1.0-28.0	10.2	7.5	40.0	50.0
169	47	1.3-16.0	5.7	3.3	12.8	17.0
Total	203	0.2-28.0	6.8	4.6	19.2	27.1

A significant amount of environmental data was generated during the 11-day investigation. Tables 16 and 17 provide a summary of all the results from testing across all the media sampled and analyzed.

5.7 Metals Other Than Lead

5.7.1 Metals In Soils

In addition to lead, field screening of soil samples included analysis for thirteen other metals listed in Table 18. A review of these results has been conducted to identify any significant trends or concentrations that may indicate a potential health risk. Due to the varying natural background concentrations of many metals, the U.S. EPA has not established acceptable contamination levels for these metals. However, the Region 9 Office of the U.S. EPA has established Preliminary Remediation Goals (PRGs) [27] for many metals to serve as guidelines for acceptable residual concentrations after a contaminated site has been remediated. Lacking a better reference guideline, these values have been used to assess relative risk from the soils analyzed during this survey. PRGs for both residential and industrial sites are available. For this review, the residential PRGs were used to provide a more conservative assessment for establishing risk to the kindergarten patrons. If background soil concentrations for the Vladivostok area are available for these metals, comparing them to this study's results would

assist in identifying localized "hot spots" associated with the kindergartens. If background concentrations are not available, identifying them should be considered before similar projects are conducted in the future.

Of the metals analyzed, only arsenic, mercury, and iron had results above the Region 9 PRGs [27]. One of the samples from kindergarten 138 (local sample #9) exceeded the PRG for arsenic while one of the sandbox samples from kindergarten 132 (local sample #19) exceeded the PRG for mercury. Collectively, the results do not indicate that either kindergarten 132 or 138 have a significantly elevated risk factor as a result of the arsenic or mercury, however a further review for mercury and arsenic in these areas may be warranted. Many samples contained iron levels in excess of the PRGs, however the wide range of concentration for naturally occurring iron may account for these values. All other results show metal concentrations well below the PRGs and do not suggest an elevated health risk for children playing in these soils.

TABLE 16. Comprehensive Summary of Testing From All Media Based on Number of Samples by Facility

Bldg.	Soil				Blood			Water		Air				Dust		Surface	
	(N)	Positive	> US Std [6]	> Rus Std [7]	(N)	> US Std [25]	> Rus Std [26]	(N)	>Std [10]	TSP (N)	TSP >Std [16]	PM-10 (N)	PM-10 >Std [16]	(N)	>Std [22]	(N)	>Std [8]
18					20	2	2										
109	24	2	0	2	45	7	13	6	0	0	0	4	3	14	0	91	18
113	26	12	0	22				11	0	6	0	0		14	1	94	2
132	31	18	0	20	26	1	4	8	0	3	0	3	1			62	13
138	26	6	0	9				4	0	4	0	2	2			96	7
141	40	11	0	28	35	11	13	6	0	6	0	2	1	9	1	116	17
162	33	7	0	23	30	12	15	8	0	2	0	4	0	7	0	83	21
169					47	6	8										
Sub Total	180	56	0	104	203	39	55	43		21	0	15	7	44	2	542	78
Housing	23	9	1	10				42	1							129	41
Paint Chips	2	2	2					12									
Total	205		3	114	203	39	55	97	1	21	0	15	7	44	2	671	119

TABLE 17. Comprehensive Summary of Testing From All Media Based on Percentages of Samples by Facility

Bldg.	Soil				Blood			Water		Air				Dust		Surface	
	(N)	Positive	% > US Std	% > Rus Std	(N)	% > US Std	% > Rus Std	(N)	% >Std	TSP (N)	TSP % >Std	PM-10 (N)	PM-10 % >Std	(N)	% >Std	(N)	% >Std
18					20	10.0	10.0										
109	24	8.3	0.0	8.3	45	15.6	28.9	6	0.0	0		4	75.0	14	0.0	91	19.8
113	26	46.2	0.0	84.6				11	0.0	6	0.0	0		14	7.1	94	2.1
132	31	58.1	0.0	64.5	26	3.8	15.4	8	0.0	3	0.0	3	33.3			62	21.0
138	26	23.1	0.0	34.6				4	0.0	4	0.0	2	100.0			96	7.3
141	40	27.5	0.0	70.0	35	31.4	37.1	6	0.0	6	0.0	2	50.0	9	11.1	116	14.7
162	33	21.2	0.0	69.7	30	40.0	50.0	8	0.0	2	0.0	4	0.0	7	0.0	83	25.3
169					47	12.8	17.0										
Sub Total	180	31.1	0.0	57.8	203	19.2	27.1	43		21	0.0	15	46.7	44	4.5	542	14.4
Housing	23	39.1	4.3	43.5				42	2.4							129	31.8
Paint Chips	2	100.0	100.0	0.0				12	0.0								
Total	205		1.5	55.6	203	19.2	27.1	97	1.0	21	0.0	15	46.7	44	4.5	671	17.7

TABLE 18. Metal Concentrations in Soil Samples

Metal	Residential Soil PRG* (mg/kg) [27]	Range (mg/kg)	Typical (mg/kg)	Detected Levels Above PRG (mg/kg)	Location
Molybdenum	390	<6.3-<50	<10	None	--
Zirconium	No PRG	33.1-1475.2	60-130	NA	--
Strontium	47000	20.9-218.2	60-120	None	--
Rubidium	No PRG	19.4-123.5	60-80	NA	--
Arsenic	22	<22-<47.1	<31-<37	37.4+/-21.4	K138 Near the Building
Mercury	23	<20.0-<61.4	<25-<35	32.1+/-20.1 41.0+/-24.0	K132 Sandbox Training Test
Zinc	23000	<44.7-1332.8	Varied	None	--
Copper	2900	<99.1-<372.0	<140-<180	None	--
Nickel	1600	<136.2-<520.8	<170-<260	None	--
Cobalt	4700	<172-<897.6	<300-<550	None	--
Iron	23000	4240.0-259686.4	17000-45000	Multiple Samples	--
Manganese	1800	<559.5-<4953.6	<600-<900	7526.4+/-2801.6	Invalid Test
Chromium	100000	<441.9-<2191.0	<700-<1100	None	--

* PRG Preliminary Remediation Goal

5.7.2. Airborne Metals

Air samples collected to quantify lead levels in ambient air (Total Suspended Particles (TSP)) and personal breathing zone air were also analyzed for cadmium, beryllium, chromium, and manganese. The U.S. EPA has not established acceptable guidelines for these metals with the exception of beryllium, for which the EPA has established a permitted industrial concentration of 2 $\mu g/m^3$ averaged over eight hours [16]. The U.S. Occupational Safety and Health Administration (OSHA) has established forth hour workweek limits that healthy workers can be exposed to these metals [19]. These OSHA guidelines are not appropriate to assess the risk to pregnant women or children, but are presented here as a basis for comparison. To accurately assess the risk to these vulnerable groups, more stringent guidelines should be established. However, a review of the sampling data for both general and personal breathing zone samples demonstrate only trace levels of any of these metals and do not suggest a significant risk to pregnant women or children.

TABLE 19. Metal Concentrations in Air Samples

Metal	OSHA 8 hr worker Stds (µg/m3)	Range (µg/m3)	Typical (µg/m3)	Detected Levels Above OSHA Std [19]
TSP Area Samples				
Cadmium	5.0	0.00035-0.011	0.00035-0.00078	None
Beryllium	2.0 C5.0	<0.00015-0.00075	<0.00016-0.00027	None
Chromium	1000.0	0.048-0.17	0.05-0.1	None
Manganese	C5000.0	<0.0065-0.011	<0.007-0.009	None
SKC Personal Samples	OSHA 8 hr worker Stds (µg/m3)	Range (µg/m3) for 8-hour samples	Typical (µg/m3) Values for 8-hour samples	Levels Above OSHA Std Extrapolated for 24-hr Exposure
Cadmium	5.0	<0.086-<8.4	<0.086	None
Beryllium	2.0 C5.0	<0.017-<1.6	<0.017	None
Chromium	1000.0	<0.17-<21	<0.21	None
Manganese	C5000.0	<0.14-<13	<0.14	None

6.0 CONCLUSIONS

6.1 By Sample Media

6.1.1 Soil/Bulk

Lead is present in many of the soils near the kindergartens and housing units; however, all sample results are below the U.S. guidelines [6][8]. When compared to Russian guidelines [7], there are 13 samples with lead concentrations above 100 ppm and an additional 50 samples with lead concentrations above 40 ppm. In addition, 50 samples did not have lead detected, but the field detection level was above the Russian normal standard of 40 mg/kg. Nineteen samples were selected randomly and "split" for laboratory analysis. Four samples were selected for additional testing to evaluate how much of the lead in the soil was soluble. The lead in the soils tested was shown to be immobile as no lead was detected in the leaching tests. Although lead was detected in most soils, the levels would not indicate the soils are a significant exposure source.

6.1.2 Water Samples

With the exception of one sample collected in housing (Uliyanovskaya 10-105), lead was not detected (< 2 μg/L) in any of the remaining samples. The one sample that indicated the presence of lead showed a concentration at the level of detection of 2 μg/L. Even though lead was detected, it is near the detection limit and well below the U.S. and WHO guidelines for lead contamination in drinking water. Water testing results indicate that water is not a source of lead in the Vladivostok region.

6.1.3 Air Samples

The sampling did not indicate any areas where airborne lead concentrations exceeded allowable limits according to U.S. guidance [16][17]. All area samples showed only trace amounts of airborne lead while personal sample results were all below the detection limits which ranged from 0.5-49 $\mu g/m^3$. All samples collected for PM 10 indicated that airborne respirable particle concentrations do not exceed U.S. guidance for 24-hour exposures. However, if the sample concentrations represent typical ambient levels throughout the year, seven of the samples exceeded U.S. guidance [16]. These results do not directly correlate to lead exposure, but indicate a high level of all types of respirable particles. The air testing results suggest that air does not represent a significant source of lead. Lead was detected in the air samples below U.S. guidelines, but it should be noted that the samplers were set-up on roofs and the results would not representative of ground level concentrations. It is possible that higher lead concentrations are present at ground level especially near roads.

6.1.3.1 General Area: Low levels of lead and other trace metals were detected in the TSP samples, although none of the samples exceeded the EPA threshold levels for lead in ambient air [16]. All the samples collected during this sampling period represented ambient air in the kindergarten area, where the samplers were located on rooftops or ledges. Other sampling locations, such as high traffic intersections, should be monitored to determine the effect of automobile exhausts. Air monitoring should be conducted through out the year to determine seasonal effects and provide data needed to perform trend analysis.

The results of PM-10 samples indicate potential for short-term exceedence of breathable particulate matter. Further sampling at different locations including high traffic areas is needed to better characterize the ambient air quality.

6.1.3.2 Personal: Results of personal air sample indicated that none of the samples exceeded the OSHA 8-hour permissible exposure limits (PELs) [19] and the American Conference of Governmental Industrial Hygienist (ACGIH) threshold limit values (TLVs®) [20] for lead. However, the personal air samples represented household environment where lead concentrations are typically monitored by dust sampling. In order to determine exposures in work environments, it is recommended that personal air monitoring be conducted for various occupations in industrial settings.

6.1.4 Swipe Dust Samples

Kindergartens were very clean and well maintained by the staff. In building # 113, the positive sample was collected from the area where the window and the window frame rub on each other as the window is opened and closed. Because of the abrasion from opening and closing windows, special attention should be given to keeping these surfaces clean and maintaining the integrity of painted surfaces. The floor sample in building # 141 that exceeded the U.S. standard [22] is most likely a result of children tracking lead dust in from the playground equipment. Additional emphasis on mopping the floors would help control this potential route of lead exposure. Overall, dust does not appear to be a significant lead exposure source.

6.1.5 Surface Testing

All the kindergartens and 16 of the 22 homes were found to contain lead-based paint (i.e., paint with lead > 1.0 mg/cm^2). In the kindergartens, more than seventy five percent of the lead-based paint identified was found on toys used inside the kindergartens or on playground equipment. The yellow paint consistently tested positive as lead-based paint accounting for more than forty percent of the positive samples. This is followed by the green paint that accounts for an additional twenty percent of these positive results. The orange paint used inside the kindergartens accounts for more than fifty percent of the samples indicating lead-based paint on the kindergarten interior surfaces. In addition to these colors, red, brown, blue, beige, and pink surfaces occasionally tested positive as lead-based paint on a variety of surfaces. In the housing, fifty six percent of all samples indicating lead-based paint were yellow. In addition to the

yellow, the brown and orange account for another forty one percent, while the remainder is accounted for in the pink paints sampled.

The yellow paint appears to represent the most significant risk of the paints sampled, however the orange and green surfaces also demonstrated lead content much greater than 5.0 mg/cm^2. Though no other colors containing greater than 5.0 mg/cm^2 were identified, many did contain lead in excess of 1.0 mg/cm^2 and should be managed accordingly. Since lead-based paint was found at both the kindergartens and homes tested this could possibly be a significant exposure source.

6.1.6 Blood-Lead Screening

Sample results indicate the children attending Kindergarten #162 have the highest levels of blood-lead and have a mean concentration that exceeds both the U.S. [25] and Russian guideline [26]. Schools 141 and 109 have average blood-lead levels approaching the Russian guidelines with the percent of students exceeding guidelines either approaching or exceeding 30 percent. The results of the blood testing do not provide enough data to indicate the source of lead is in the kindergartens or if it comes from other sources including the homes of these children.

6.2 Conclusions by Facility

6.2.1 Building 18. Blood-lead testing is the only data collected during this survey. Results indicate a low incident of elevated blood-lead levels

6.2.2 Building. 109. Surface testing indicates that most of the lead found on-site is on the toys or the playground equipment, however some lead-based paint has been applied to shelving and baseboards. Soil data indicates very limited lead content in the sandboxes and no lead contamination elsewhere on-site. Lead was not detected in the water sample collected at this kindergarten. Air sampling done at this kindergarten indicates high levels of respirable particulates are in the air, however samples were not collected to specifically identify airborne lead at this location. Dust samples collected inside the kindergarten did not contain lead. Blood testing indicates some children have elevated blood-lead levels. Results suggest the source of the lead is the painted toys and playground equipment, however the source of lead could not be conclusively identified.

6.2.3 Building 113. Of the 94 surfaces tested, only the orange doorframe and yellow rocking horse exceeded the guideline for lead-based paint. Testing of the soils indicated many areas that contain lead. All soil samples collected adjacent to the building contained lead, while a majority of the samples collected near the fence and road also contained lead. Nearly one third of the samples collected in the sandboxes tested positive for lead while one half of the samples collected from other areas of the playground tested positive for lead. Air and water samples collected at the kindergarten did not contain lead, while only one dust sample contained lead. Only one of fourteen dust samples contained lead. No blood sampling was done.

6.2.4 Building 132. Surface testing shows that lead-based paint has been used on many pieces of playground equipment and toys as well the baseboards within the kindergarten. All soil samples collected adjacent to the building contained lead, while a majority of the samples collected near the fence and road also contained lead. Nearly one half of the samples collected in the sandboxes tested positive for lead. Air and water samples collected at the kindergarten did not contain lead, however one air sample indicates that respirable particulates exceed air guidelines. Blood sampling indicates that a limited number of children have elevated blood-lead levels. Results suggest the source of the lead is the painted toys and playground equipment, however the source of lead could not be conclusively identified.

6.2.5 Building 138. Of the 96 surfaces tested, only the orange baseboard, pink handrail, blue playground equipment, green bench, and yellow toy blocks exceeded the guideline for lead-based paint. Approximately one half of the soil samples collected adjacent to the building, the fence, and the road contained lead. Only two of the 17 samples collected in the sandboxes tested positive for lead. Air and water samples collected at the kindergarten did not contain lead, however both air samples collected to evaluate respirable particulates indicate the guidelines are exceeded. No blood sampling was done.

6.2.6 Building 141. Surface testing shows that lead-based paint has been used on many pieces of playground equipment and toys as well some interior surfaces within the kindergarten. Less than one third of all soil samples collected from adjacent to the building, in the sandboxes, and other playground areas contained lead. Air and water samples collected at the kindergarten did not contain lead, however one air sample indicates that respirable particulates exceed air guidelines. Only one of nine dust samples contained lead. Approximately one third of children tested have elevated blood-lead levels. Results suggest the source of the lead is the painted toys and playground equipment, however the source of lead could not be conclusively identified.

6.2.7 Building 162. Surface testing shows that lead-based paint has been used on many pieces of playground equipment and toys as well a few interior surfaces within the kindergarten. Two thirds of the soil samples collected from near the road or fence contained lead, while one third of the playground area samples contained lead. Only one sample out of twenty collected in the sandboxes contained lead. Air and water samples collected at the kindergarten did not contain lead and sampling results indicates that respirable particulate do not exceed air guidelines. Dust samples collected inside the kindergarten did not contain lead. Results of blood-lead testing indicate a high number of children have elevated blood-lead levels. Results suggest the source of the lead is the painted toys and playground equipment, however the source of lead could not be conclusively identified.

6.2.8 Building 169. Blood-lead testing is the only data collected during this survey. Results indicate a low incident of elevated blood-lead levels

6.3 General Conclusions

- Inconsistent sampling of all media at each facility makes detailed comparisons difficult. For example, some facilities did not have blood data collected, some didn't have air, and some didn't

have water. However, there was enough data collected from each media and facility to draw general conclusions.

- Water results suggest that the drinking water is not a route for lead exposure.

- Air results suggest inhalation is not a significant route for lead exposure. The same can not be concluded for airborne particulate matter.

- Results indicate that the greater the number of lead-based paint containing surfaces, the greater the incident of high blood-lead levels. Results from most facilities in this study support this conclusion, however, some variance is identified and is likely the result of inconsistent sample numbers per location and random error.

- It is clear, based on the blood results that children are being exposed, but a single source is not readily identifiable. The homes and other epidemiological parameters will need additional attention in order to pinpoint the lead sources that are contributing to the elevated blood lead levels. One area that does warrant immediate attention is the need to control the use of lead-containing paint where children can contact the painted surface. Although the lead containing yellow paint found at many of the kindergartens cannot be directly linked to the elevated blood lead levels, it certainly cannot be ruled out as a contributing source and is one that can be controlled.

7.0 RECOMMENDATIONS

- Develop regulations and enforcement polices to restrict the use of paint with significant levels of lead.

- Implement a systematic follow-up program with the questionnaire at Appendix G to guide the investigation.

- Continue ambient air sample collection for TSP and Minivol-PM-10 to better determine ambient concentrations of both respirable particles and airborne lead. Other sampling locations, such as high traffic intersections, may need to be monitored to determine the effect of automobile exhausts. Consider collecting the samples at ground level where not limited by power supply and security restrictions.

- Establish "health fairs" where blood lead level checks (and perhaps blood pressure, cholesterol, etc.) would be provided as a service to the public.

- Ensure the capillary blood screening results are followed up with venous blood sampling and standard laboratory analysis to confirm the screening results.

- Conduct additional surface sampling to better characterize the extent of lead-based paint use and the link to high blood lead levels. Specifically, more homes including those of children whose blood lead levels are not high should be sampled to establish a baseline for blood lead comparisons.

- Perform dust sampling in areas other than the kindergartens. The dust from floors and windowsills in the homes should be examined for lead content as well.

- Establish a community awareness program informing parents of significant sources of lead (e.g., yellow paint) and the need to limit children's contact with such sources and the need to stress hand washing and cleaning up after playing outside.

- Investigate ways to distinguish non-lead containing paint from lead containing paint such as a reference or stock number and educate schools and parents on ways to detect lead-containing paint and to avoid its use.

- Ensure that follow-up actions do not create additional problems. For example, if lead-containing paint is to be removed, ensure that the removal process does not release fine dust particles spreading the lead. If an administrative solution is going to be to used (e.g., the lead-containing paint is going to be left in place or covered over) then ensure a routine inspection process is created to routine inspect lead-containing surfaces to make sure they are intact and undamaged.

- Consider removing soil from sandboxes that had detectable levels of lead where the box was painted with lead-containing paint. Ensure that only clean sand is placed back in the box and the lead-containing paint is not exposed.

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8.0 REFERENCES

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APPENDICES

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Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
1	141	12	V99	S	2001	Niton, 700; U9152509LY	Near Building	<48			Dirt, Very Fine
2	141	43	V99	S	2002	Niton, 700; U9152509LY	Near Building	<42	<50		Black Dirt, Lab Split Taken
3	141	40	V99	S	2003	Niton, 700; U9152509LY	Near Building	67+/-29			Black Dirt
4	141	44	V99	S	2004	Niton, 700; U9152509LY	Near Building	65+/-33			Black Dirt
5	141	10	V99	S	2005	Niton, 700; U9152509LY	Near Building	<49			Sand
6	141	11	V99	S	2006	Niton, 700; U9152509LY	Near Building	<37			Black Dirt
7	141	28	V99	S	2007	Niton, 700; U9152509LY	Near Building	<45			Black Dirt
8	141	14	V99	S	2008	Niton, 700; U9152509LY	Near Building	<40			Sand
9	141	26	V99	S	2009	Niton, 700; U9152509LY	Near Building	<41	<50		Dirt, Lab Split Taken
10	141	5	V99	S	2010	Niton, 700; U9152509LY	Playground	<36			Sand
11	141	27	V99	S	2011	Niton, 700; U9152509LY	Playground	<34			Sandy Clay
12	141	13	V99	S	2012	Niton, 700; U9152509LY	Playground	<43			Sand
13	141	8	V99	S	2013	Niton, 700; U9152509LY	Playground	<43			Dirt
14	141	16	V99	S	2014	Niton, 700; U9152509LY	Playground	<39			Dirt
15	141	22	V99	S	2015	Niton, 700; U9152509LY	Playground	<42			Dirt, Very Fine
16	141	35	V99	S	2016	Niton, 700; U9152509LY	Playground	<40			Dirt
17	141	38	V99	S	2017	Niton, 700; U9152509LY	Playground	35+/-21	<50		Dirt, Very Fine; Lab Split Taken
18	141	45	V99	S	2018	Niton, 700; U9152509LY	Playground	44+/-28			Dirt, Very Fine
19	141	15	V99	S	2019	Niton, 700; U9152509LY	Playground	<49	58.1	<0.3	Dirt, Very Fine; Lab Split Taken
20	141	7	V99	S	2020	Niton, 700; U9152509LY	Grassy Area	<33			Black Dirt
21	141	29	V99	S	2021	Niton, 700; U9152509LY	Grassy Area	59+/-23			Black Dirt
22	141	9	V99	S	2022	Niton, 700; U9152509LY	Grassy Area	<42			Coarse Sand
23	141	18	V99	S	2023	Niton, 700; U9152509LY	Grassy Area	<45			Sand
24	141	37	V99	S	2024	Niton, 700; U9152509LY	Grassy Area	<42			Sand
25	141	21	V99	S	2025	Niton, 700; U9152509LY	Grassy Area	<50	<50		Dirt, Lab Split Taken
26	141	36	V99	S	2026	Niton, 700; U9152509LY	Grassy Area	42+/-27			Black Dirt
27	141	32	V99	S	2027	Niton, 700; U9152509LY	Grassy Area	<42			Dirt
28	141	31	V99	S	2028	Niton, 700; U9152509LY	Playground	<38			Dirt
29	141	6	V99	S	2029	Niton, 700; U9152509LY	Playground	<44	<50		Dirt, Lab Split Taken

Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
30	141	46	V99	S	2030	Niton, 700; U9152509LY	Playground	52+/-27			Black Dirt
31	141	25	V99	S	2031	Niton, 700; U9152509LY	Playground	<39			Dirt, Fine
32	141	39	V99	S	2032	Niton, 700; U9152509LY	Playground	<39			Sand
33	141	24	V99	S	2033	Niton, 700; U9152509LY	Playground	<40			Dirt
34	141	23	V99	S	2034	Niton, 700; U9152509LY	Playground	<36	<50		Sand, Lab Split Taken
35	141	19	V99	S	2035	Niton, 700; U9152509LY	Playground	48+/-26			Dirt
36	141	42	V99	S	2036.1	Niton, 700; U9152509LY	Playground	162+/-28	207		Black Dirt, Very Fine; Lab Split Taken
36B	141	48	V99	S	2036.2	Niton, 700; U9152509LY	Playground	99+/-25			Repeat Test for Sample 36
37	141	17	V99	S	2037	Niton, 700; U9152509LY	Playground	<40			Sand
38	141	41	V99	S	2038	Niton, 700; U9152509LY	Grassy Area	<43			Dirt
39	141	33	V99	S	2039	Niton, 700; U9152509LY	Grassy Area	<43			Coarse Sand
40	141	34	V99	S	2040	Niton, 700; U9152509LY	Grassy Area	55+/-29			Sand, Fine
1	132	70	V99	S	2041	Niton, 700; U9152509LY	Sandbox	68+/-26			Sand
2	132	77	V99	S	2042	Niton, 700; U9152509LY	Sandbox	<38			Sand
3	132	64	V99	S	2043	Niton, 700; U9152509LY	Sandbox	<37			Sand
4	132	62	V99	S	2044	Niton, 700; U9152509LY	Sandbox	70+/-28			Sand
5	132	61	V99	S	2045	Niton, 700; U9152509LY	Sandbox	<39			Sand
6	132	85	V99	S	2046	Niton, 700; U9152509LY	Sandbox	42+/-24			Sand
7	132	75	V99	S	2047	Niton, 700; U9152509LY	Sandbox	<37			Sand
8	132	84	V99	S	2048	Niton, 700; U9152509LY	Sandbox	<38			Sand
9	132	76	V99	S	2049	Niton, 700; U9152509LY	Sandbox	57+/-25			Sand
10	132	69	V99	S	2050	Niton, 700; U9152509LY	Sandbox	<40			Sand
11	132	66	V99	S	2051	Niton, 700; U9152509LY	Sandbox	54+/-26			Sand
12	132	63	V99	S	2052	Niton, 700; U9152509LY	Sandbox	87+/-31			Sand
13	132	57	V99	S	2053	Niton, 700; U9152509LY	Sandbox	<38	57.5	<0.3	Sand; Lab Split Taken
14	132	51	V99	S	2054	Niton, 700; U9152509LY	Sandbox	<36			Sand
15	132	58	V99	S	2055	Niton, 700; U9152509LY	Sandbox	75+/-26			Sand
16	132	73	V99	S	2056	Niton, 700; U9152509LY	Sandbox	<39			Sand
17	132	60	V99	S	2057	Niton, 700; U9152509LY	Sandbox	<40			Sand
18	132	74	V99	S	2058	Niton, 700; U9152509LY	Sandbox	<40			Sand
19	132	52	V99	S	2059	Niton, 700; U9152509LY	Sandbox	53+/-26			Sand

Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
20	132	65	V99	S	2060	Niton, 700; U9152509LY	Sandbox	<37			Sand
21	132	67	V99	S	2061	Niton, 700; U9152509LY	Near Building	106+/-31			Sand
22	132	55	V99	S	2062.1	Niton, 700; U9152509LY	Near Building	199+/-33			Sand
22B	132	56	V99	S	2062.2	Niton, 700; U9152509LY	Near Building	210+/-36			Repeat Test for Sample 22; Sand
23	132	54	V99	S	2063	Niton, 700; U9152509LY	Near Building	74+/-27			Sand
24	132	59	V99	S	2064	Niton, 700; U9152509LY	Near Building	118+/-29	123		Sand; Lab Split Taken
25	132	50	V99	S	2065	Niton, 700; U9152509LY	Near Building	83+/-25			Sand
26	132	82	V99	S	2066	Niton, 700; U9152509LY	Near Fence	<43			Sandy/Clay
27	132	72	V99	S	2067	Niton, 700; U9152509LY	Near Road	63+/-25			Black Dirt
28	132	53	V99	S	2068	Niton, 700; U9152509LY	Near Road	<43			Sand
29	132	49	V99	S	2069	Niton, 700; U9152509LY	Near Fence	47+/-25			Sand
30	132	68	V99	S	2070	Niton, 700; U9152509LY	Near Fence	48+/-31			Sand
1	138	173	V99	S	2071	Niton, 700; U9152509LY	Sandbox	<38			Sand
2	138	186	V99	S	2072	Niton, 700; U9152509LY	Sandbox	<43			Sand
3	138	187	V99	S	2073	Niton, 700; U9152509LY	Sandbox	<38			Sand
4	138	188	V99	S	2074	Niton, 700; U9152509LY	Sandbox	<38			Sand
5	138	171	V99	S	2075	Niton, 700; U9152509LY	Sandbox	<39			Sand, FIne
6	138	183	V99	S	2076	Niton, 700; U9152509LY	Near Building	<39			Dirt, Very Fine
7	138	174	V99	S	2077	Niton, 700; U9152509LY	Near Building	<35			Black Dirt
8	138	177	V99	S	2078	Niton, 700; U9152509LY	Near Building	50+/-28			Dirt
9	138	169	V99	S	2079	Niton, 700; U9152509LY	Near Building	113+/-23	160		Black Dirt, Lab Split Taken
10	138	176	V99	S	2080	Niton, 700; U9152509LY	Near Building	<33			Black Dirt
11	138		V99	S	2081	Niton, 700; U9152509LY	Sandbox	No Sample			No Sample Taken
12	138		V99	S	2082	Niton, 700; U9152509LY	Sandbox	No Sample			No Sample Taken
13	138	175	V99	S	2083	Niton, 700; U9152509LY	Sandbox	42+/-24			Sand
14	138	181	V99	S	2084	Niton, 700; U9152509LY	Sandbox	<37			Dirt
15	138		V99	S	2085	Niton, 700; U9152509LY	Sandbox	No Sample			No Sample Taken
16	138	182	V99	S	2086	Niton, 700; U9152509LY	Sandbox	50+/-27			Dirt

Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
17	138	166	V99	S	2087	Niton, 700; U9152509LY	Sandbox	<39	<50		Dirt, Lab Split Taken
18	138	179	V99	S	2088	Niton, 700; U9152509LY	Sandbox	<38			Dirt
19	138	164	V99	S	2089	Niton, 700; U9152509LY	Sandbox	<37			Sand
20	138	170	V99	S	2090	Niton, 700; U9152509LY	Sandbox	<38			Sand
21	138	167	V99	S	2091	Niton, 700; U9152509LY	Sandbox	<40			Sand
22	138	168	V99	S	2092	Niton, 700; U9152509LY	Sandbox	<34			Sand
23	138	172	V99	S	2093	Niton, 700; U9152509LY	Sandbox	<39			Coarse Sand
24	138	165	V99	S	2094	Niton, 700; U9152509LY	Sandbox	<35			Coarse Sand
25	138	185	V99	S	2095	Niton, 700; U9152509LY	Sandbox	<42			Sand
26	138	163	V99	S	2096	Niton, 700; U9152509LY	Near Back Gate	<35			Dirt
27	138	180	V99	S	2097	Niton, 700; U9152509LY	Near Front Gate	46+/-30			Sand
28	138	178	V99	S	2098	Niton, 700; U9152509LY	Near Fence	84+/-28			Dirt, Very Fine
29	138	184	V99	S	2099	Niton, 700; U9152509LY	Near Fence	<45			Dirt
1	113	210	V99	S	2100	Niton, 700; U9152509LY	Outside Sandbox	<40			Dirt
2	113	204	V99	S	2101	Niton, 700; U9152509LY	Outside Sandbox	71+/-30			Dirt
3	113	195	V99	S	2102	Niton, 700; U9152509LY	Sandbox	<45			Pebbles
4	113	207	V99	S	2103	Niton, 700; U9152509LY	Sandbox	<40			Sand/Pebbles
5	113	194	V99	S	2104	Niton, 700; U9152509LY	Sandbox	<39			Sand/Pebbles
6	113	208	V99	S	2105	Niton, 700; U9152509LY	Sandbox	<43			Dirt/Pebbles
7	113	205	V99	S	2106	Niton, 700; U9152509LY	Sandbox	<42			Sand/Pebbles
8	113	203	V99	S	2107	Niton, 700; U9152509LY	Outside Sandbox	194+/-31	<50	<0.3	Dirt/Pebbles; Lab Split Taken
9	113	209	V99	S	2108	Niton, 700; U9152509LY	Outside Sandbox	<45			Dirt
10	113	198	V99	S	2109	Niton, 700; U9152509LY	Near Fence	118+/-31			Dirt
11	113	199	V99	S	2110	Niton, 700; U9152509LY	Near Fence	53+/-30			Sand/Pebbles
12	113	212	V99	S	2111	Niton, 700; U9152509LY	Sandbox	<46			Sand
13	113	190	V99	S	2112	Niton, 700; U9152509LY	Sandbox	41+/-27			Dirt/Pebbles
14	113	201	V99	S	2113	Niton, 700; U9152509LY	Sandbox	<42			Sand/Pebbles

Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
15	113	213	V99	S	2114	Niton, 700; U9152509LY	Sandbox	45+/-27			Coarse Sand
16	113	214	V99	S	2115	Niton, 700; U9152509LY	Sandbox	45+/-27			Dirt/Pebbles
17	113	196	V99	S	2116	Niton, 700; U9152509LY	Near Fence	<40			Dirt
18	113	206	V99	S	2117	Niton, 700; U9152509LY	Sandbox	<42			Dirt/Pebbles
19	113	192	V99	S	2118	Niton, 700; U9152509LY	Sandbox	<41	<50		Dirt/Pebbles, Lab Split Taken
20	113	202	V99	S	2119	Niton, 700; U9152509LY	Sandbox	<43			Dirt/Pebbles
21	113	211	V99	S	2120	Niton, 700; U9152509LY	Sandbox	65+/-30			Sand/Pebbles
22	113	189	V99	S	2121	Niton, 700; U9152509LY	Sandbox	<42			Dirt/Pebbles
23	113	215	V99	S	2122	Niton, 700; U9152509LY	Near Building	65+/-20			Dirt
24	113	193	V99	S	2123	Niton, 700; U9152509LY	Near Building	110+/-30			Dirt
25	113	191	V99	S	2124	Niton, 700; U9152509LY	Near Building	73+/-28			Dirt/Weeds
26	113	197	V99	S	2125	Niton, 700; U9152509LY	Near Building	65+/-29			Dirt
1	162	260	V99	S	2126	Niton, 700; U9152509LY	Sandbox	<41			Dirt/Pebbles
2	162	251	V99	S	2127	Niton, 700; U9152509LY	Sandbox	<41			Dirt/Pebbles
3	162	245	V99	S	2128	Niton, 700; U9152509LY	Sandbox	<40			Dirt/Pebbles
4	162	240	V99	S	2129	Niton, 700; U9152509LY	Sandbox	<38			Dirt/Pebbles
5	162	246	V99	S	2130	Niton, 700; U9152509LY	Sandbox	<45			Dirt/Pebbles
6	162	243	V99	S	2131	Niton, 700; U9152509LY	Sandbox	<38			Dirt/Pebbles
7	162	252	V99	S	2132	Niton, 700; U9152509LY	Sandbox	<40			Dirt/Pebbles
8	162	261	V99	S	2133	Niton, 700; U9152509LY	Sandbox	44+/-27			Dirt/Pebbles
9	162	238	V99	S	2134	Niton, 700; U9152509LY	Sandbox	<40			Dirt/Pebbles
10	162	262	V99	S	2135	Niton, 700; U9152509LY	Sandbox	<41			Dirt/Pebbles
11	162	244	V99	S	2136	Niton, 700; U9152509LY	Sandbox	<43			Dirt/Pebbles
12	162	248	V99	S	2137	Niton, 700; U9152509LY	Sandbox	<44			Dirt/Pebbles
13	162	263	V99	S	2138	Niton, 700; U9152509LY	Sandbox	<40			Dirt/Pebbles
14	162	247	V99	S	2139	Niton, 700; U9152509LY	Sandbox	<41			Dirt/Pebbles
15	162	239	V99	S	2140	Niton, 700; U9152509LY	Sandbox	<40			Dirt/Pebbles
16	162	241	V99	S	2141	Niton, 700; U9152509LY	Sandbox	<42			Dirt/Pebbles
17	162	264	V99	S	2142	Niton, 700; U9152509LY	Sandbox	<40			Dirt/Pebbles
18	162	236	V99	S	2143	Niton, 700; U9152509LY	Sandbox	<42			Dirt/Pebbles
19	162	256	V99	S	2144	Niton, 700; U9152509LY	Sandbox	<41			Dirt/Pebbles
20	162	242	V99	S	2145	Niton, 700; U9152509LY	Sandbox	<42			Dirt

Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
21	162	234	V99	S	2146	Niton, 700; U9152509LY	Grassy Area	<39			Dirt
22	162	258	V99	S	2147	Niton, 700; U9152509LY	Grassy Area	50+/-28			Dirt
23	162	257	V99	S	2148	Niton, 700; U9152509LY	Grassy Area	<41			Dirt
24	162	250	V99	S	2149	Niton, 700; U9152509LY	Near Building	<45			Dirt/Pebbles
25	162	265	V99	S	2150	Niton, 700; U9152509LY	Near Building	<43			Dirt
26	162	235	V99	S	2151	Niton, 700; U9152509LY	Near Building	<42			Dirt/Pebbles
27	162	249	V99	S	2152	Niton, 700; U9152509LY	Near Fence	75+/-29			Dirt/Weeds
28	162	259	V99	S	2153	Niton, 700; U9152509LY	Near Fence	49+/-30			Black Dirt
29	162	289	V99	S	2154	Niton, 700; U9152509LY	Near Fence	<33			Black Dirt
30	162	237	V99	S	2155	Niton, 700; U9152509LY	Near Fence	<43			Dirt
31	162	290	V99	S	2194	Niton, 700; U9152509LY	Near Garbage	243+/-27			Black Dirt
32	162	291	V99	S	2195	Niton, 700; U9152509LY	Near Gate	72+/-26	72.2		Black Dirt
33	162	292	V99	S	2196	Niton, 700; U9152509LY	Near Fence	86+/-24			Black Dirt
1	109	219	V99	S	2156	Niton, 700; U9152509LY	Sandbox	<33			Sand
2	109	220	V99	S	2157	Niton, 700; U9152509LY	Sandbox	<32	<50		Sand; Lab Split Taken
3	109	286	V99	S	2158	Niton, 700; U9152509LY	Sandbox	<35			Sand
4	109	221	V99	S	2159	Niton, 700; U9152509LY	Sandbox	<33			Sand
5	109	222	V99	S	2160	Niton, 700; U9152509LY	Sandbox	42+/-23			Sand
6	109	218	V99	S	2161	Niton, 700; U9152509LY	Sandbox	<36			Sand
7	109	285	V99	S	2162	Niton, 700; U9152509LY	Sandbox	<34			Sand
8	109	223	V99	S	2163	Niton, 700; U9152509LY	Sandbox	<36			Sand
9	109	288	V99	S	2164	Niton, 700; U9152509LY	Sandbox	<33			Sand
10	109	224	V99	S	2165	Niton, 700; U9152509LY	Sandbox	<32			Sand
11	109	284	V99	S	2166	Niton, 700; U9152509LY	Near Fence	<36			Black Dirt
12	109	225	V99	S	2167	Niton, 700; U9152509LY	Sandbox	<31	<50		Sand; Lab Split Taken
13	109	226	V99	S	2168	Niton, 700; U9152509LY	Sandbox	<28			Sand
14	109	227	V99	S	2169	Niton, 700; U9152509LY	Sandbox	<27			Sand
15	109	217	V99	S	2170	Niton, 700; U9152509LY	Sandbox	<30			Sand
16	109	281	V99	S	2171	Niton, 700; U9152509LY	Sandbox	<32			Sand
17	109	287	V99	S	2172	Niton, 700; U9152509LY	Sandbox	<28			Sand
18	109	228	V99	S	2173	Niton, 700; U9152509LY	Sandbox	<30			Sand
19	109	280	V99	S	2174	Niton, 700; U9152509LY	Sandbox	42+/-24			Sand
20	109	229	V99	S	2175	Niton, 700; U9152509LY	Sandbox	<27			Sand

Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
21	109	230	V99	S	2176	Niton, 700; U9152509LY	Sandbox	<28			Sand
22	109	279	V99	S	2177	Niton, 700; U9152509LY	Near Building	<32			Sand
23	109	231	V99	S	2178	Niton, 700; U9152509LY	Near Building	<34			Sand
24	109	283	V99	S	2179	Niton, 700; U9152509LY	Near Building	<35			Black Dirt
109G1	109	389-392	V99	C	2301	Niton, 700; U9152509LY	Playground Yellow Giraffe	15616+/-128			Paint chips from yellow giraffe
109G2	109	393-396	V99	C	2300	Niton, 700; U9152509LY	Playground Yellow Giraffe	25344+/-171	49800		Paint chips from yellow giraffe
Kirov 6-65	9	267	V99	S	2180	Niton, 700; U9152509LY	Play Area Near Building	44.9+/-27			Dirt
Kirov 19/2-52	19/2	268	V99	S	2181	Niton, 700; U9152509LY	Play Area Near Building	<40			DIrt
Voen City 34	34	269	V99	S	2182	Niton, 700; U9152509LY	Play Area Near Building	<39			Sand/Pebbles
Mahnitohorsraja 16-73	16	272	V99	S	2183.1	Niton, 700; U9152509LY	Play Area Near Building	378+/-35			Dirt
Mahnitohorsraja 16-73	16	270	V99	S	2183.2	Niton, 700; U9152509LY	Play Area Near Building	396+/-34			Dirt
Pr. 100 yr old Vladivostok 147-52	147	271	V99	S	2184	Niton, 700; U9152509LY	Play Area Near Building	<44			Dirt
Kirov 21/1-46	21/1	273	V99	S	2185	Niton, 700; U9152509LY	Play Area Near Building	<38			Black DIrt
Kirov 40-29	40	274	V99	S	2186	Niton, 700; U9152509LY	Play Area Near Building	<36			Black Dirt
Volkov 1a-53	1a	275	V99	S	2187	Niton, 700; U9152509LY	Play Area Near Building	<40			Black Dirt
Volkov 3-85	3	276	V99	S	2188	Niton, 700; U9152509LY	Play Area Near Building	<40			Black Dirt
Karboyshev 26-118	26	293	V99	S	2189	Niton, 700; U9152509LY	Play Area Near Building	<36			Sand
Ulyanovskaya 10	10	294	V99	S	2190	Niton, 700; U9152509LY	Play Area Near Building	149+/-27			Dirt
Postoyshev 5-22	5	295	V99	S	2191	Niton, 700; U9152509LY	Play Area	34+/-23			Dirt

Vladivostok Ecology Project: Soil and Bulk Paint Results

Sample #	Bldg #	Niton Reading: XL#			Team Assigned I.D. #	Equipment #	Physical Location	Niton Results mg/kg (ppm)	Laboratory Results Method SW 846-7420 mg/kg	Laboratory Results Method SW 846-1311 (mg/L)	Comments
							Near Building				
Postoyshev 43-10	43	296	V99	S	2192	Niton, 700; U9152509LY	Play Area Near Building	<34			Sand
P. Lumumboy 44-28	44	297	V99	S	2193	Niton, 700; U9152509LY	Play Area Near Building	<33			Dirt
P. Lumumboy 53/1-20	55/1	298	V99	S	2194	Niton, 700; U9152509LY	Play Area Near Building	<35			Sand
Dobrovolskaya 23-134	23	436	V99	S	2195	Niton, 700; U9152509LY	Play Area Near Building	<42	623	<0.3	Black Dirt
Dobrovolskaya 15-123	15	438	V99	S	2196	Niton, 700; U9152509LY	Play Area Near Building	76+/-26			Dirt
Volkov 9-29	9	441	V99	S	2197	Niton, 700; U9152509LY	Play Area Near Building	<37			Black Dirt
Sakhalinskaya 56-942	56	440	V99	S	2198	Niton, 700; U9152509LY	Play Area Near Building	<38			Black Dirt
Dobrovolskaya 39-8	39	439	V99	S	2199	Niton, 700; U9152509LY	Play Area Near Building	86+/-24			Dirt
Dobrovolskaya 11-323	11	437	V99	S	2200	Niton, 700; U9152509LY	Play Area Near Building	63+/-27			Dirt
P. Lumumboy 34-14	34	548	V99	S	2201	Niton, 700; U9152509LY	Play Area Near Building	<39			Black Dirt

Vladivostok Ecology Project: Water Sample Results

TEAM ID #	LOCAL #	DATE	RESULTS	UNITS	LOCATION	CHEMIST	NOTES
V99W1001	1	01.09.99	ND	ug/L	Artem water reservuar 1	OLGA	If no chemist is noted, then it was one of the Russians.
V99W1002	2	01.09.99	ND	ug/L	Artem water reservuar 2	OLGA	<2ug/L is recorded as ND (none detected)
V99W1003	3	01.09.99	ND	ug/L	Artem water reservuar 3	OLGA	10 ug/L is the WHO action level
V99W1004	4	01.09.99	ND	ug/L	BOGATINSKOE W.R.	OLGA	
V99W1005	5	01.09.99	ND	ug/L	SEDANKA W.R.	OLGA	
V99W1006	6			ug/L			No Sample
V99W1007	7			ug/L			No Sample
V99W1008	8			ug/L			No Sample
V99W1009	9			ug/L			No Sample
V99W1010	10	02.09 .99	ND	ug/L	Artem water reservuar 1	OLGA	
V99W1011	11	02.09.99	ND	ug/L	Artem water reservuar 2	OLGA	
V99W1012	12	02.09.99	ND	ug/L	Artem water reservuar 3	OLGA	
V99W1013	13	02.09.99	ND	ug/L	BOGATINSKOE W.R.	OLGA	
V99W1014	14	02.09.99	ND	ug/L	BOGATINSKOE W.R.	OLGA	
V99W1015	15	02.09.99	ND	ug/L	SEDANKA W.R.	OLGA	
V99W1016	16	02.09.99	ND	ug/L	SEDANKA W.R.	OLGA	
V99W1017	17			ug/L			No Sample
V99W1018	18			ug/L			No Sample
V99W1019	19			ug/L			No Sample
V99W1020	20			ug/L			No Sample
V99W1021	21	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1022	22	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1023	23	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1024	24	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1025	25	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1026	26	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1027	27	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1028	28	02.09.99	ND	ug/L	SCOOL 162	OLGA	
V99W1029	29	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1030	30	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1031	31	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1032	32	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1033	33	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1034	34	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1035	35	02.09.99	ND	ug/L	SCOOL 113	OLGA	

Vladivostok Ecology Project: Water Sample Results

TEAM ID #	LOCAL #	DATE	RESULTS	UNITS	LOCATION	CHEMIST	NOTES
V99W1036	36	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1037	37	02.09.99	ND	ug/L	SCOOL 109	OLGA	
V99W1038	38	02.09.99	ND	ug/L	SCOOL 109	OLGA	
V99W1039	39	02.09.99	ND	ug/L	SCOOL 109	OLGA	
V99W1040	40			ug/L			No Sample
V99W1041	41			ug/L			No Sample
V99W1042	42			ug/L			No Sample
V99W1043	43	03.09.99	ND	ug/L	SCOOL 132	MARIYA	
V99W1044	44			ug/L			No Sample
V99W1045	45	02.09.99	ND	ug/L	SCOOL 138	OLGA	
V99W1046	46	02.09.99	ND	ug/L	SCOOL 138	OLGA	
V99W1047	47	02.09.99	ND	ug/L	SCOOL 138	OLGA	
V99W1048	48	02.09.99	ND	ug/L	SCOOL 138	OLGA	
V99W1049	49	03.09.99	ND	ug/L	SCOOL 132	MARIYA	
V99W1050	50	03.09.99	ND	ug/L	SCOOL 132	MARIYA	
V99W1051	51			ug/L			No Sample
V99W1052	52			ug/L			No Sample
V99W1053	53			ug/L			No Sample
V99W1054	54			ug/L			No Sample
V99W1055	55	03.09.99	ND	ug/L	SCOOL 132	MARIYA	
V99W1056	56	03.09.99	ND	ug/L	SCOOL 132	MARIYA	
V99W1057	57	03.09.99	ND	ug/L	SCOOL 132	SVETLANA	
V99W1058	58	03.09.99	ND	ug/L	SCOOL 132	SVETLANA	
V99W1059	59	03.09.99	ND	ug/L	SCOOL 132	SVETLANA	
V99W1060	60	03.09.99	ND	ug/L	SCOOL 141	SVETLANA	
V99W1061	61	03.09.99	ND	ug/L	SCOOL 141	SVETLANA	
V99W1062	62	03.09.99	ND	ug/L	SCOOL 141	SVETLANA	
V99W1063	63	03.09.99	ND	ug/L	SCOOL 141	SVETLANA	
V99W1064	64	03.09.99	ND	ug/L	SCOOL 141	SVETLANA	
V99W1065	65	03.09.99	ND	ug/L	SCOOL 141	SVETLANA	
V99W1066	66	03.09.99	ND	ug/L	KIROVA 6-65	MARIYA	
V99W1067	67	03.09.99	ND	ug/L	KIROVA 21\1-46	MARIYA	
V99W1068	68	03.09.99	ND	ug/L	MAGNITOGORSKAYA 16-73	MARIYA	
V99W1069	69	03.09.99	ND	ug/L	MILLITARY BASE 34	MARIYA	
V99W1070	70	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1071	71	02.09.99	ND	ug/L	SCOOL 113	OLGA	

Vladivostok Ecology Project: Water Sample Results

TEAM ID #	LOCAL #	DATE	RESULTS	UNITS	LOCATION	CHEMIST	NOTES
V99W1072	72	02.09.99	ND	ug/L	SCOOL 113	OLGA	
V99W1073	73	03.09.99	ND	ug/L	100YEARS 147-52	MARIYA	
V99W1074	74	03.09.99	ND	ug/L	KIROVA 19/2-52	MARIYA	
V99W1075	75	03.09.99	ND	ug/L	MILLITARY BASE 34	SVETLANA	
V99W1076	76	03.09.99	ND	ug/L	MILLITARY BASE 35	SVETLANA	
V99W1077	77	03.09.99	ND	ug/L	MAGNITOGORSKAYA 16-73	SVETLANA	
V99W1078	78	03.09.99	ND	ug/L	100YEARS 147-52	SVETLANA	
V99W1079	79	03.09.99	ND	ug/L	KIROVA 6-65	SVETLANA	
V99W1080	80	03.09.99	ND	ug/L	KIROVA 21/1-46	SVETLANA	
V99W1081	81	06.09.99	ND	ug/L	VOLKOVA 3-85	SVETLANA	
V99W1082	82	06.09.99	ND	ug/L	KIROVA 40-29	SVETLANA	
V99W1083	83	06.09.99	ND	ug/L	VOLKOVA 1A-53	SVETLANA	
V99W1084	84	06.09.99	ND	ug/L	VOLKOVA 3-85	SVETLANA	
V99W1085	85	06.09.99	ND	ug/L	KARBYSHEVA 26-118	SVETLANA	
V99W1086	86	06.09.99	ND	ug/L	LUMUMBY 53/1-20	SVETLANA	
V99W1087	87	06.09.99	ND	ug/L	KIROVA 40-29	SVETLANA	
V99W1088	88	06.09.99	ND	ug/L	LUMUMBY 4-28	MARIYA	
V99W1089	89	06.09.99	ND	ug/L	KARBYSHEVA 26-72	MARIYA	
V99W1090	90	06.09.99	ND	ug/L	VOLKOVA 1A-53	MARIYA	
V99W1091	91	06.09.99	ND	ug/L	POSTYSHEVA 5-22	MARIYA	
V99W1092	92	06.09.99	ND	ug/L	SCOOL 109	MARIYA	
V99W1093	93	06.09.99	ND	ug/L	SCOOL 109	MARIYA	
V99W1094	94	06.09.99	ND	ug/L	SCOOL 109	MARIYA	
V99W1095	95	06.09.99	ND	ug/L	POSTYSHEVA 43-10	MARIYA	
V99W1096	96	06.09.99	ND	ug/L	VOLKOVA 9-29	MARIYA	
V99W1097	97	06.09.99	ND	ug/L	SACHALINSKAYA 56-942	SVETLANA	
V99W1098	98	06.09.99	ND	ug/L	VOLKOVA 9-29	SVETLANA	
V99W1099	99	06.09.99	ND	ug/L	DOBROVOLSKOGO 39-8	SVETLANA	
V99W1100	100	06.09.99	ND	ug/L	POSTYSHEVA 43-10	SVETLANA	
V99W1101	101	06.09.99	ND	ug/L	POSTYSHEVA 5-22	SVETLANA	
V99W1102	102	06.09.99	ND	ug/L	DOBROVOLSKOGO 39-8	SVETLANA	
V99W1103	103	06.09.99	ND	ug/L	KARBYSHEVA 26-72	SVETLANA	
V99W1104	104	06.09.99	ND	ug/L	LUMUMBY 53/1-20	SVETLANA	
V99W1105	105	06.09.99	ND	ug/L	DOBROVOLSKOGO 11-32	SVETLANA	
V99W1106	106	06.09.99	2	ug/L	ULIYANOVSKAYA 10-105	SVETLANA	
V99W1107	107	06.09.99	ND	ug/L	LUMUMBY 44-28	SVETLANA	

Vladivostok Ecology Project: Water Sample Results

TEAM ID #	LOCAL #	DATE	RESULTS	UNITS	LOCATION	CHEMIST	NOTES
V99W1108	108	06.09.99	ND	ug/L	DOBROVOLSKOGO 15-123	SVETLANA	
V99W1109	109	06.09.99	ND	ug/L	KARBYSHEVA 26-118	SVETLANA	
V99W1110	110	06.09.99	ND	ug/L	DOBROVOLSKOGO 23-134	SVETLANA	
V99W1111	111	06.09.99	ND	ug/L	DOBROVOLSKOGO 23-134	SVETLANA	
V99W1112	112	06.09.99	ND	ug/L	DOBROVOLSKOGO 11-323	SVETLANA	
V99W1113	113	06.09.99	ND	ug/L	DOBROVOLSKOGO 15-123	SVETLANA	

Vladivostok Ecology Project: Air Sample Results

Local I.D. #	Bldg #	Sample Date	Niton Reading XL#			Team Assigned I.D. #	Equipment#	Niton Pb Result (µg)	Laboratory Analysis Results (µg/m³)				
									Cadmium	Lead	Beryllium	Chromium	Manganese
XRF FIELD SCREENING													
TSP Samples													
VL-20	KG-162	4-Sep-99	455-458	V99	A	4001	Niton, 700; U9152509LY	<27	<0.00065	0.039	0.0004	<0.016	0.075
VL-21	KG-113	4-Sep-99	459-462	V99	A	4002	Niton, 700; U9152509LY	<21	0.0007	0.053	0.0002	<0.0070	0.05
VL-22	KG-141	4-Sep-99	451-454	V99	A	4003	Niton, 700; U9152509LY	<27	0.0005	0.057	<0.00016	<0.0077	0.048
VL-23	KG-138	4-Sep-99	447-450	V99	A	4004	Niton, 700; U9152509LY	<29	0.0004	0.054	<0.00015	<0.0072	0.054
VL-24	Control	3-Sep-99	543-546	V99	A	4005	Niton, 700; U9152509LY	<22	<0.69 ug	<18ug	<0.36 ug	<17 ug	<35 ug
VL-25	Control	3-Sep-99	539-542	V99	A	4006	Niton, 700; U9152509LY	<28	<0.69 ug	<18ug	<0.36 ug	<17 ug	<35 ug
VL-44	KG-162	3-Sep-99	473-476	V99	A	4007	Niton, 700; U9152509LY	<29	0.0004	0.038	0.0002	<0.0079	0.049
VL-45	KG-113	3-Sep-99	477-481	V99	A	4008	Niton, 700; U9152509LY	<28	0.0004	0.049	<0.00016	<0.0075	0.055
VL-46	KG-113	3-Sep-99	469-472	V99	A	4009	Niton, 700; U9152509LY	<29	0.0008	0.057	0.0008	0.011	0.14
VL-47	KG-141	3-Sep-99	464-467	V99	A	4010	Niton, 700; U9152509LY	<30	0.0007	0.076	0.0007	0.0089	0.12
VL-48	KG-141	2-Sep-99	491-495	V99	A	4011	Niton, 700; U9152509LY	<30	0.0006	0.054	0.0002	<0.0065	0.057
VL-49	KG-132	2-Sep-99	487-490	V99	A	4012	Niton, 700; U9152509LY	<30	0.0005	0.082	0.0002	<0.0077	0.063
VL-50	KG-138	2-Sep-99	496-500	V99	A	4013	Niton, 700; U9152509LY	<30	0.0006	0.06	0.0002	<0.0074	0.069
VL-51	KG-113	2-Sep-99	483-486	V99	A	4014	Niton, 700; U9152509LY	<28	0.0006	0.081	<0.00015	<0.0069	0.063
VL-52	KG-138	1-Sep-99	501-504	V99	A	4015	Niton, 700; U9152509LY	<28	0.0021	0.18	0.0003	0.0091	0.17
VL-53	KG-113	1-Sep-99	514-517	V99	A	4016	Niton, 700; U9152509LY	<30	0.0011	0.14	0.0003	<0.0087	0.1
VL-54	KG-141	1-Sep-99	509-512	V99	A	4017	Niton, 700; U9152509LY	<26	0.0007	0.12	0.0002	<0.0077	0.073
VL-55	KG-132	1-Sep-99	505-508	V99	A	4018	Niton, 700; U9152509LY	<27	0.0005	0.15	0.0003	0.011	0.087
VL-56	KG-113	31-Aug-99	522-525	V99	A	4019	Niton, 700; U9152509LY	<28	0.0009	0.14	<0.00026	<0.012	0.092
VL-57	KG-141	31-Aug-99	526-529	V99	A	4020	Niton, 700; U9152509LY	<30	0.0005	0.1	0.0002	<0.0081	0.062
VL-58	KG-132	31-Aug-99	535-538	V99	A	4021	Niton, 700; U9152509LY	<27	0.0004	0.091	0.0002	<0.0074	0.061
VL-59	KG-138	30-Aug-99	518-521	V99	A	4022	Niton, 700; U9152509LY	<29	0.0005	0.097	<0.00023	<0.011	0.054
VL-60	KG-141	30-Aug-99	531-534	V99	A	4023	Niton, 700; U9152509LY	<28	0.011	0.11	0.0002	0.0072	0.11
VL-30	Control	5-Sep-99		V99	A	4024			<0.69 ug	<18ug	<0.36 ug	<17 ug	<35 ug
VL-31	Control	5-Sep-99		V99	A	4025			<0.69 ug	<18ug	<0.36 ug	<18 ug	<35 ug
SKC Samples													
Zatsepipena-1		010999/0800		V99	P	4501			<0.086	<0.5	<0.017	<0.21	<0.14
Nutrechina-2		010999/0800		V99	P	4502			<0.12	<0.72	<0.024	<0.31	<0.20
Nutrechina-1		010999/0000		V99	P	4503			<0.086	<0.5	<0.017	<0.21	<0.14

Vladivostok Ecology Project: Air Sample Results

Local I.D. #	Bldg #	Sample Date	Niton Reading XL#			Team Assigned I.D. #	Equipment#	Niton Pb Result (µg)	Laboratory Analysis Results (µg/m³)				
									Cadmium	Lead	Beryllium	Chromium	Manganese
Smirnova-2		020999/0100		V99	P	4504			<0.086	<0.5	<0.017	<0.21	<0.14
Smirnova-1		010999/1700		V99	P	4505			<0.088	<0.51	<0.017	<0.22	<0.14
Zatsepipena-3		020999/0000		V99	P	4506			<0.086	<0.5	<0.017	<0.21	<0.14
Nutrechina-3		010999/1600		V99	P	4507			<0.087	<0.5	<0.017	<0.22	<0.14
Zatsepipena-2		010999/1600		V99	P	4508			<0.093	<0.54	<0.018	<0.23	<0.15
Meshchanenikova-1		010999/1100		V99	P	4509			<0.086	<0.5	<0.017	<0.21	<0.14
Rekachevskaya-3		010999/1400		V99	P	4510			<0.086	<0.5	<0.017	<0.21	<0.14
Meshchanenikova-3		020999/0300		V99	P	4511			<0.086	<0.5	<0.017	<0.21	<0.14
Rekachevskaya-2		010999/2200		V99	P	4512			<0.086	<0.5	<0.017	<0.21	<0.14
Meshchanenikova-2		010999/1900		V99	P	4513			<0.086	<0.5	<0.017	<0.21	<0.14
Smirnova-3		010999/0900		V99	P	4514			<0.097	<0.56	<0.019	<0.24	<0.15
Rekachevskaya-1		040999/0600		V99	P	4515			<0.087	<0.5	<0.017	<0.22	<0.14
Blank-1				V99	P	4516			<0.12 ug	<0.72ug	<0.024 ug	<0.31ug	<0.20 ug
Blank-2				V99	P	4517			<0.12 ug	<0.72ug	<0.024 ug	<0.31ug	<0.20 ug
Borozokova-1		050999/1000		V99	P	4518			<0.086	<0.5	<0.017	<0.21	<0.14
Borozokova-2		050999/1800		V99	P	4519			<0.17	<0.97	<0.033	<0.42	<0.27
Shuklina-2		040999/1300		V99	P	4520			<0.086	<0.5	<0.017	<0.21	<0.14
Shuklina-3		040999/2100		V99	P	4521			<0.086	<0.5	<0.017	<0.21	<0.14
Butkina-1		050999/0800		V99	P	4522			<0.059	<0.4	<0.013	<0.17	<0.11
Butkina-2		050999/1600		V99	P	4523			<0.086	<0.5	<0.017	<0.21	<0.14
Butkina-3		060999/0000		V99	P	4524			<8.4	<49	<1.6	<21	<13
Bondarenko-1		040999/0800		V99	P	4525			<0.086	<0.5	<0.017	<0.21	<0.14
Bondarenko-2		030999/1600		V99	P	4526			<0.086	<0.5	<0.017	<0.21	<0.14
Bondarenko-3		040999/0000		V99	P	4527			<0.087	<0.5	<0.017	<0.22	<0.14
Kulakoua-1		030999/2120		V99	P	4528			<0.086	<0.5	<0.017	<0.21	<0.14
Kulakoua-2		040999/0520		V99	P	4529			<0.086	<0.5	<0.017	<0.21	<0.14
Kulakoua-3		040999/1320		V99	P	4530			<0.086	<0.5	<0.017	<0.21	<0.14
Mostovaya-1		050999/0000		V99	P	4531			<0.086	<0.5	<0.017	<0.21	<0.14
Mostovaya-2		050999/0800		V99	P	4532			<0.086	<0.5	<0.017	<0.21	<0.14
Mostovaya-3		050999/1600		V99	P	4533			<0.086	<0.5	<0.017	<0.21	<0.14
Blank-3				V99	P	4534			<0.12 ug	<0.72ug	<0.024 ug	<0.31ug	<0.20 ug
Blank-4				V99	P	4535			<0.12 ug	<0.72ug	<0.024 ug	<0.31ug	<0.20 ug

Vladivostok Ecology Project: Air Sample Results

Local I.D. #	Bldg #	Sample Date	Niton Reading XL#			Team Assigned I.D. #	Equipment#	Niton Pb Result (µg)	Laboratory Analysis Results (µg/m³)				
									Cadmium	Lead	Beryllium	Chromium	Manganese
Minvol Samples								Lead (µg)	Total Mass Result (µg/m³)				
VR51	KG-109	1-Sep-99		V99	A	4305	Niton, 700; U9152509LY	<31		67			
VR54	KG-162	1-Sep-99		V99	A	4312	Niton, 700; U9152509LY	<31		10			
VR66	KG-162	4-Sep-99		V99	A	4315	Niton, 700; U9152509LY	<21		27			
VR52	KG-132	1-Sep-99		V99	A	4301				40			
VR55	KG-132	2-Sep-99		V99	A	4302				59			
VR53	KG-138	31-Aug-99		V99	A	4303				52			
VR57	KG-138	1-Sep-99		V99	A	4304				78			
VR58	KG-132	2-Sep-99		V99	A	4306				42			
VR63	KG-141	3-Sep-99		V99	A	4307				76			
VR65	KG-141	4-Sep-99		V99	A	4308				43			
VR60	KG-109	2-Sep-99		V99	A	4309				51			
VR62	KG-109	3-Sep-99		V99	A	4310				62			
VR67	KG-109	4-Sep-99		V99	A	4311	Invalid Sample, Incorrect Volume			27 (Invalid)			
VR56	KG-162	2-Sep-99		V99	A	4312				29			
VR64	KG-162	3-Sep-99		V99	A	4314				42			
VR61	Control	2-Sep-99		V99	A	4316				No Data			

Vladivostok Ecology Project: Swipe Dust Sample Results

Local I.D. #	Bldg #	Niton Reading XL #	Team Assigned I.D. #			Equipment#	Physical Location	Surface Type: ws=window sill f=floor ww=window well n/a=other surface	Niton Result µg/100 cm2	Laboratory Results µg/100 cm2
1	113	114-117	V99	D	3001	Niton, 700; U9152509LY	Medical Office Window Sill	ws	<34	<10
2	113	106-109	V99	D	3002	Niton, 700; U9152509LY	Entryway Floor	f	<35	<10
3	113	122-125	V99	D	3003	Niton, 700; U9152509LY	Entryway Step	f	<33	<10
4	113	146-149	V99	D	3004	Niton, 700; U9152509LY	Playroom Floor, Entryway	f	<30	<10
5	113	118-121	V99	D	3005	Niton, 700; U9152509LY	Playroom Chair, Seating Surface	n/a	<32	<10
6	113	142-145	V99	D	3006	Niton, 700; U9152509LY	Playroom Window Sill, Green Wall	ws	<34	<10
7	113	134-137	V99	D	3007	Niton, 700; U9152509LY	Playroom Window Sill, White Wall	ws	<32	<10
8	113	130-133	V99	D	3008	Niton, 700; U9152509LY	Playroom Table Top	n/a	<32	<10
9	113	126-129	V99	D	3009	Niton, 700; U9152509LY	Playroom Window Well, White	ww	<30	<10
10	113	158-161	V99	D	3010	Niton, 700; U9152509LY	2nd Floor Playroom Window Sill	ws	57.5+/-24	115
11	113	154-157	V99	D	3011	Niton, 700; U9152509LY	2nd Floor Playroom Window Well	ww	<33	<10
12	113	138-141	V99	D	3012	Niton, 700; U9152509LY	2nd Floor Playroom, Pink Window Well Rail	ww	<32	<10
13	113	150-153	V99	D	3013	Niton, 700; U9152509LY	2nd Floor, Bedroom Window Well	ww	<32	<10
14	113	95-98	V99	D	3014	Niton, 700; U9152509LY	2nd Floor Playroom Floor, Entryway	f	<34	<10
1	162	301-304	V99	D	3015	Niton, 700; U9152509LY	2-3 yr old room, floor	f	<32	<10
2	162	305-308	V99	D	3016	Niton, 700; U9152509LY	2-3 yr old room, window sill	ws	<32	<10
3	162	309-312	V99	D	3017	Niton, 700; U9152509LY	3-4 yr old room, floor	f	<32	<10
4	162	315-318	V99	D	3018	Niton, 700; U9152509LY	3-4 yr old room, window sill	ws	<32	<10
5	162	319-322	V99	D	3019	Niton, 700; U9152509LY	3-4 yr old room, floor	f	<29	<10
6	162	324-327	V99	D	3020	Niton, 700; U9152509LY	3-4 yr old room, window sill	ws	<32	<10
7	162	328-331	V99	D	3021	Niton, 700; U9152509LY	5-6 yr old room, floor	f	<32	<10
1	109	332-335	V99	D	3022	Niton, 700; U9152509LY	2-3 yr old room, floor	f	<31	<10
2	109	336-339	V99	D	3023	Niton, 700; U9152509LY	2-3 yr old room, window sill	ws	<31	<10
3	109	340-343	V99	D	3024	Niton, 700; U9152509LY	5-6 yr old room, floor	f	<32	<10

Vladivostok Ecology Project: Swipe Dust Sample Results

Local I.D. #	Bldg #	Niton Reading XL #	Team Assigned I.D. #			Equipment#	Physical Location	Surface Type: ws=window sill f=floor ww=window well n/a=other surface	Niton Result µg/100 cm2	Laboratory Results µg/100 cm2
4	109	344-347	V99	D	3025	Niton, 700; U9152509LY	5-6 yr old room, window sill	ws	<30	<10
5	109	348-351	V99	D	3026	Niton, 700; U9152509LY	4-5 yr old room, floor	f	<33	<10
6	109	352-355	V99	D	3027	Niton, 700; U9152509LY	4-5 yr old room, window sill	ws	<29	<10
7	109	356-359	V99	D	3028	Niton, 700; U9152509LY	4-5 yr old room downstairs, floor	f	<31	<10
8	109	360-363	V99	D	3029	Niton, 700; U9152509LY	4-5 yr old room downstairs, window sill	ws	<31	<10
9	109	364-367	V99	D	3030	Niton, 700; U9152509LY	5-6 yr old room upstairs, floor	f	<30	<10
10	109	368-371	V99	D	3031	Niton, 700; U9152509LY	5-6 yr old room upstairs, window sill	ws	<30	16
11	109	372-375	V99	D	3032	Niton, 700; U9152509LY	4-5 yr old room upstairs, floor baseboard	f	<32	<10
12	109	376-379	V99	D	3033	Niton, 700; U9152509LY	4-5 yr old room upstairs, window sill	ws	<33	10
13	109	381-384	V99	D	3034	Niton, 700; U9152509LY	4-5 yr old room upstairs, blank	n/a	<30	<10
14	109	385-388	V99	D	3035	Niton, 700; U9152509LY	outside yellow arch	n/a	<32	10
1	141	397-400	V99	D	3036	Niton, 700; U9152509LY	2-3 yr old room, floor	f	<31	<10
2	141	401-404	V99	D	3037	Niton, 700; U9152509LY	2-3 yr old room, window sill	ws	<29	<10
3	141	406-409	V99	D	3038	Niton, 700; U9152509LY	2-3 yr old room, floor	f	<30	12
4	141	410-413	V99	D	3039	Niton, 700; U9152509LY	2-3 yr old room, window sill	ws	<33	<10
5	141	414-417	V99	D	3040	Niton, 700; U9152509LY	2-3 yr old room, rocking horse	n/a	61.8+/-22	42
6	141	418-421	V99	D	3041	Niton, 700; U9152509LY	5 yr old room upstairs, floor	f	<28	<10
7	141	422-425	V99	D	3042	Niton, 700; U9152509LY	6 yr old room upstairs, window sill	ws	<31	<10
8	141	427-430	V99	D	3043	Niton, 700; U9152509LY	sports room, floor	f	<32	<10
9	141	431-434	V99	D	3044	Niton, 700; U9152509LY	sports room,blank	n/a	<31	<10

Vladivostok Ecology Project: Surface Testing Results

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5001	School 113	68	2-3 yr play room	Wall		Plaster	yellow	0.24	0.06	1.1	8/30/99	Any lead present is on the surface layer
V99C5002	School 113	69	2-3 yr play room	Door		Wood	white	0.06	0.15	5.4	8/30/99	Any lead present is 4 to 5 layers deep
V99C5003	School 113	70	2-3 yr play room		cabinet	Wood	white	0.13	0.1	2.8	8/30/99	Any lead present is 2 to 3 layers deep
V99C5004	School 113	71	2-3 yr play room	Door	jamb	Wood	orange	1.19	0.18	1.8	8/30/99	Any lead present is 2 layers deep
V99C5005	School 113	72	2-3 yr play room		tile		orange	0.81	0.13	1.4	8/30/99	Any lead present is on the surface layer
V99C5006	School 113	73	2-3 yr play room	Door	Casing	Wood	orange	0.88	0.12	1.5	8/30/99	Any lead present is on the surface layer
V99C5007	School 113	74	2-3 yr play room	Window	Casing	Wood	white	0.14	0.18	3.9	8/30/99	Any lead present is 4 to 5 layers deep
V99C5008	School 113	75	2-3 yr play room	Window		Wood	white	0.06	0.15	1.7	8/30/99	Any lead present is 2 layers deep
V99C5009	School 113	76	2-3 yr play room		toy bear		orange	0	0.06	1	8/30/99	No lead present
V99C5010	School 113	77	2-3 yr play room		toy xylophone	Metal	various	0.79	0.06	1	8/30/99	Any lead present is on the surface layer
V99C5011	School 113	78	2-3 yr play room		doll	Wood	various	0.01	0.03	2.2	8/30/99	Any lead present is 2 layers deep
V99C5012	School 113	79	2-3 yr play room		toy, lady bug	Metal	red/black	0.16	0.03	1	8/30/99	Any lead present is on the surface layer
V99C5013	School 113	80	2-3 yr play room		rocking horse	Wood	yellow	2.02	0.21	1.1	8/30/99	Any lead present is on the surface layer
V99C5014	School 113	81	2-3 yr play room		cabinet	Wood	various	0.09	0.06	1.2	8/30/99	Any lead present is on the surface layer
V99C5015	School 113	82	2-3 yr play room		rocking horse	Wood	various	0.87	0.1	1.2	8/30/99	Any lead present is on the surface layer
V99C5016	School 113	83	2-3 yr play room		slide	Metal	tan	0.06	0.13	1	8/30/99	Any lead present is on the surface layer
V99C5017	School 113	84	6-7 yr play room		chair	Wood	peach	0.06	0.14	1.3	8/30/99	Any lead present is on the surface layer
V99C5018	School 113	85	6-7 yr ylw play rm	Wall		Plaster	yellow	0.27	0.09	1.3	8/30/99	Any lead present is on the surface layer
V99C5019	School 113	86	6-7 yr ylw play rm	Wall		Plaster	white	0.01	0.01	1	8/30/99	Any lead present is on the surface layer

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5020	School 113	87	6-7 yr ylw play rm	Wall		Plaster	blue green	0.24	0.15	2	8/30/99	Any lead present is 2 layers deep
V99C5021	School 113	88	6-7 yr ylw play rm	Window	Casing	Wood	white	0.13	0.13	2.3	8/30/99	Any lead present is 2 to 3 layers deep
V99C5022	School 113	89	6-7 yr ylw play rm	Window	Casing	Wood	white	0.48	0.67	7.1	8/30/99	Any lead present is 4 to 5 layers deep
V99C5023	School 113	90	6-7 yr ylw play rm		toy block	Wood	yellow	0.67	0.11	1	8/30/99	Any lead present is on the surface layer
V99C5024	School 113	91	6-7 yr ylw play rm		toy block	Wood	blue	0	0.02	1	8/30/99	No lead present
V99C5025	School 113	92	6-7 yr ylw play rm		toy block	Wood	green	0.25	0.08	1.2	8/30/99	Any lead present is on the surface layer
V99C5026	School 113	93	6-7 yr ylw play rm		toy block	Wood	red	0.12	0.04	1	8/30/99	Any lead present is on the surface layer
V99C5027	School 113	94	6-7 yr ylw play rm		mini piano	Wood	green	0.01	0.03	1.9	8/30/99	Any lead present is 2 layers deep
V99C5028	School 113	95	6-7 yr ylw play rm		flute	Wood	green	0.03	0.01	1	8/30/99	Any lead present is on the surface layer
V99C5029	School 113	96	6-7 yr ylw play rm		flute	Wood	red/white	0.05	0.07	2.1	8/30/99	Any lead present is 2 layers deep
V99C5030	School 113	97	6-7 yr ylw play rm	Door	jamb	Wood	yellow	0.51	0.1	1.4	8/30/99	Any lead present is on the surface layer
V99C5031	School 113	98	6-7 yr pink play rm	Wall		Wood	pink	0.23	0.13	2.7	8/30/99	Any lead present is 2 to 3 layers deep
V99C5032	School 113	99	6-7 yr pink play rm	Wall		Wood	pink	0.15	0.1	2	8/30/99	Any lead present is 2 layers deep
V99C5033	School 113	100	6-7 yr pink play rm	Wall		Wood	white	0.24	0.12	2.4	8/30/99	Any lead present is 2 to 3 layers deep
V99C5034	School 113	101	6-7 yr pink play rm		door	Wood	white	0.25	0.15	2.8	8/30/99	Any lead present is 2 to 3 layers deep
V99C5035	School 113	102	6-7 yr pink play rm		toy horse	Wood	black	0.01	0.04	1	8/30/99	Any lead present is on the surface layer
V99C5036	School 113	103	6-7 yr pink play rm	Door	jamb, door	Wood	pink	0.38	0.14	2.3	8/30/99	Any lead present is 2 to 3 layers deep
V99C5037	School 113	104	6-7 yr pink play rm		leg, chair	Wood	red	0	0.01	1	8/30/99	No lead present
V99C5038	School 113	105	6-7 yr pink play rm		toy desk	Wood	Lt blue	0.01	0.08	1	8/30/99	Any lead present is on the surface layer
V99C5039	School 113	106	6-7 yr pink play rm		toy desk	Wood	white	0.04	0.06	1	8/30/99	Any lead present is on the

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												surface layer
V99C5040	School 113	107	6-7 yr pink play rm		toy block	Wood	blue	0	0.01	1	8/30/99	No lead present
V99C5041	School 113	108	6-7 yr pink play rm		toy block	Wood	yellow	0.09	0.26	10	8/30/99	Any lead present is 4 to 5 layers deep
V99C5042	School 113	109	6-7 yr pink play rm		toy block	Wood	red	0	0.01	1	8/30/99	No lead present
V99C5043	School 113	110	6-7 yr pink play rm		toy block	Wood	yellow	0.01	0.01	1	8/30/99	Any lead present is on the surface layer
V99C5044	School 113	111	6-7 yr pink play rm		toy block	Wood	green	0	0.01	1	8/30/99	No lead present
V99C5045	School 113	112	6-7 yr pink play rm		toy block	Wood	dark green	0.35	0.07	1	8/30/99	Any lead present is on the surface layer
V99C5046	School 113	113	6-7 yr pink play rm		box	Wood	white	0.04	0.19	3.6	8/30/99	Any lead present is 2 to 3 layers deep
V99C5047	School 113	114	6-7 yr pink play rm		box	Wood	green	0.15	0.05	1	8/30/99	Any lead present is on the surface layer
V99C5048	School 113	115	6-7 yr pink play rm		toy stove	Wood	white	0.05	0.09	1.3	8/30/99	Any lead present is on the surface layer
V99C5049	School 113	116	Stair		rail	Metal	peach	0.16	0.1	1.7	8/30/99	Any lead present is 2 layers deep
V99C5050	School 113	117	Hall		chair	Wood	green	0.35	0.13	1.2	8/30/99	Any lead present is on the surface layer
V99C5051	School 113	118	4-5 yr play room	Wall		Plaster	Lt blue	0.1	0.08	1.9	8/30/99	Any lead present is 2 layers deep
V99C5052	School 113	119	4-5 yr play room	Wall		Plaster	Lt blue	0.07	0.05	1.1	8/30/99	Any lead present is on the surface layer
V99C5053	School 113	120	4-5 yr play room	Wall		Plaster	white	0.02	0.13	3.1	8/30/99	Any lead present is 2 to 3 layers deep
V99C5054	School 113	121	4-5 yr play room	Door	jamb, door	Wood	Lt blue	0.13	0.13	2.8	8/30/99	Any lead present is 2 to 3 layers deep
V99C5055	School 113	122	4-5 yr play room	Door	jamb, door	Wood	brown	0.16	0.07	1.8	8/30/99	Any lead present is 2 layers deep
V99C5056	School 113	125	4-5 yr play room		toy disk	Wood	red	0.01	0.05	3.8	8/30/99	Any lead present is 4 to 5 layers deep
V99C5057	School 113	128	4-5 yr play room		toy block	Wood	green	0	0.01	1	8/30/99	No lead present
V99C5058	School 113	129	4-5 yr play room		toy block	Wood	yellow	0.58	0.12	1.1	8/30/99	Any lead present is on the surface layer
V99C5059	School 113	130	4-5 yr play room		toy block	Wood	red	0.05	0.06	1	8/30/99	Any lead present is on the surface layer

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5060	School 113	131	4-5 yr play room		toy block	Wood	blue	0	0.1	1	8/30/99	No lead present
V99C5061	School 113	132	4-5 yr play room		stool	Wood	black/gold	0.34	0.03	1	8/30/99	Any lead present is on the surface layer
V99C5062	School 113	133	4-5 yr play room		leg, stool	Wood	gold	0.06	0.04	1	8/30/99	Any lead present is on the surface layer
V99C5063	School 113	134	4-5 yr play room		jamb, door	Wood	brown	0.5	0.1	1.1	8/30/99	Any lead present is on the surface layer
V99C5064	School 113	135	5-6 yr play room		toy block	Wood	green	0.13	0.06	1.1	8/30/99	Any lead present is on the surface layer
V99C5065	School 113	136	5-6 yr play room		toy block	Wood	red	0.05	0.18	10	8/30/99	Any lead present is 4 to 5 layers deep
V99C5066	School 113	137	5-6 yr play room		toy block	Wood	red	0	0.02	1.3	8/30/99	No lead present
V99C5067	School 113	138	5-6 yr play room		toy block	Wood	yellow	0.41	0.11	1	8/30/99	Any lead present is on the surface layer
V99C5068	School 113	139	5-6 yr play room		toy block	Wood	dark red	0.45	0.11	1	8/30/99	Any lead present is on the surface layer
V99C5069	School 113	140	5-6 yr play room		toy block	Wood	blue	0.04	0.19	3.6	8/30/99	Any lead present is 2 to 3 layers deep
V99C5070	School 113	141	5-6 yr play room	Door	Casing	Wood	Lt blue	0.23	0.11	2.5	8/30/99	Any lead present is 2 to 3 layers deep
V99C5071	School 113	142	5-6 yr play room		toy artist	other	various	0.01	0.04	3.2	8/30/99	Any lead present is 2 to 3 layers deep
V99C5072	School 113	143	5-6 yr play room	Door	jamb, door	Wood	Lt blue	0.09	0.16	2.2	8/30/99	Any lead present is 2 layers deep
V99C5073	School 113	144	5-6 yr play room	Door	jamb, door	Wood	dark blue	0.08	0.23	10	8/30/99	Any lead present is 4 to 5 layers deep
V99C5074	School 113	145	5-6 yr play room		cabinet	Wood	brown	0	0.01	1	8/30/99	No lead present
V99C5075	School 113	146	Exterior	Door	door	Wood	orange	0.94	0.21	2	8/30/99	Any lead present is 2 layers deep
V99C5076	School 113	147	Exterior	Window	Casing	Wood	orange	0.83	0.24	2.5	8/30/99	Any lead present is 2 to 3 layers deep
V99C5077	School 113	148	Exterior	Door		Wood	orange	0.03	0.02	1	8/30/99	Any lead present is on the surface layer
V99C5078	School 113	149	Exterior		climbing bars	Metal	red	0.05	0.09	2.2	8/30/99	Any lead present is 2 layers deep
V99C5079	School 113	150	Exterior		climbing bars	Metal	gold	0.23	0.1	1.4	8/30/99	Any lead present is on the surface layer

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5080	School 113	151	Exterior		climbing bars	Metal	pink	0.06	0.09	1.6	8/30/99	Any lead present is on the surface layer
V99C5081	School 113	152	Exterior		climbing bars	Metal	blue	0.03	0.21	2.5	8/30/99	Any lead present is 2 to 3 layers deep
V99C5082	School 113	153	Exterior		bench	Wood	yellow	0.57	0.13	1.2	8/30/99	Any lead present is on the surface layer
V99C5083	School 113	154	Exterior		bench	Wood	blue	0.28	0.31	8.1	8/30/99	Any lead present is 4 to 5 layers deep
V99C5084	School 113	155	Exterior		bench	Wood	green	0.25	0.11	1.4	8/30/99	Any lead present is on the surface layer
V99C5085	School 113	156	Exterior		bench	Wood	red	0.35	0.28	4.9	8/30/99	Any lead present is 4 to 5 layers deep
V99C5086	School 113	157	Exterior		slide	Metal	red	0.22	0.21	4.5	8/30/99	Any lead present is 4 to 5 layers deep
V99C5087	School 113	158	Exterior		slide	Metal	green	0.19	0.1	1.5	8/30/99	Any lead present is on the surface layer
V99C5088	School 113	159	Exterior		slide	Metal	blue	0.03	0.07	3.8	8/30/99	Any lead present is 4 to 5 layers deep
V99C5089	School 113	160	Exterior		fence	Metal	green	0.02	0.24	1.3	8/30/99	Any lead present is on the surface layer
V99C5090	School 113	161	Exterior		fence	Metal	green	0.02	0.04	1	8/30/99	Any lead present is on the surface layer
V99C5091	School 113	162	Exterior	Window	Casing	Metal	brown	0.04	0.07	1.2	8/30/99	Any lead present is on the surface layer
V99C5092	School 113	163	Exterior		bench	Wood	yellow	0.77	0.16	1.4	8/30/99	Any lead present is on the surface layer
V99C5093	School 113	164	Exterior		bench	Wood	green	0.29	0.13	1.6	8/30/99	Any lead present is on the surface layer
V99C5094	School 113	165	Exterior		asphalt		white	0	0.07	1	8/30/99	No lead present
V99C5095	School 138	166	Calibration					0.62	0.00	0.0	8/31/99	Any lead present is on the surface layer
V99C5096	School 138	167	2-3 yr Play Room	Wall		Plaster	Green	0.22	0.09	1.9	8/31/99	Any lead present is 2 layers deep
V99C5097	School 138	168	2-3 yr Play Room	Wall		Plaster	White	0.03	0.09	4.8	8/31/99	Any lead present is 4 to 5 layers deep
V99C5098	School 138	169	2-3 yr Play Room	Door	Door	Wood	White	0.15	0.09	2.2	8/31/99	Any lead present is 2 layers deep

Vladivostok Ecology Project: Surface Testing Results

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm^2)	± (mg/cm^2)	Depth Index	Date	Note
V99C5099	School 138	170	2-3 yr Play Room	Door	Baseboard	Wood	Pink	0.24	0.09	1.4	8/31/99	Any lead present is on the surface layer
V99C5100	School 138	171	2-3 yr Play Room	Wall		Plaster	Pink	0.20	0.10	2.0	8/31/99	Any lead present is 2 layers deep
V99C5101	School 138	172	2-3 yr Play Room	Window	Casing	Wood	White	0.05	0.04	1.2	8/31/99	Any lead present is on the surface layer
V99C5102	School 138	172	2-3 yr Play Room	Window	Radiator	Metal	Pink	0.05	0.04	1.2	8/31/99	Any lead present is on the surface layer
V99C5103	School 138	174	2-3 yr Play Room	Window	Radiator	Metal	Pink	0.09	0.06	1.3	8/31/99	Any lead present is on the surface layer
V99C5104	School 138	175	2-3 yr Play Room			Wood	Yellow	0.49	0.11	1.3	8/31/99	Any lead present is on the surface layer
V99C5105	School 138	176	2-3 yr Play Room		toy, block	Wood	Blue	0.08	0.21	2.2	8/31/99	Any lead present is 2 layers deep
V99C5106	School 138	177	2-3 yr Play Room		toy, block	Wood	Green	0.78	0.11	1.1	8/31/99	Any lead present is on the surface layer
V99C5107	School 138	178	2-3 yr Play Room		toy, block	Wood	Red	0.42	0.06	1.0	8/31/99	Any lead present is on the surface layer
V99C5108	School 138	179	2-3 yr Play Room		rocking horse	Wood	Blue	0.02	0.03	1.0	8/31/99	Any lead present is on the surface layer
V99C5109	School 138	180	4-5 yr Play Room	Wall		Plaster	Beige	0.31	0.11	2.2	8/31/99	Any lead present is 2 layers deep
V99C5110	School 138	181	4-5 yr Play Room	Door	Door	Wood	White	0.07	0.06	1.1	8/31/99	Any lead present is on the surface layer
V99C5111	School 138	182	4-5 yr Play Room	Door	Jamb	Wood	Orange	0.61	0.16	2.5	8/31/99	Any lead present is 2 to 3 layers deep
V99C5112	School 138	183	4-5 yr Play Room	Wall		Plaster	White	0.00	0.04	1.0	8/31/99	No lead present
V99C5113	School 138	184	4-5 yr Play Room	Wall	Chair	Wood	Green	0.18	0.07	1.2	8/31/99	Any lead present is on the surface layer
V99C5114	School 138	185	4-5 yr Play Room	Wall	Chair	Metal	Grey	0.07	0.02	1.0	8/31/99	Any lead present is on the surface layer
V99C5115	School 138	186	4-5 yr Play Room	Window	Casing	Wood	White	0.11	0.08	1.7	8/31/99	Any lead present is 2 layers deep
V99C5116	School 138	187	4-5 yr Play Room	Window	Sash	Wood	White	0.10	0.10	1.7	8/31/99	Any lead present is 2 layers deep
V99C5117	School 138	188	4-5 yr Play Room	Wall		Plaster	Beige	0.20	0.12	2.1	8/31/99	Any lead present is 2 layers deep

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5118	School 138	189	4-5 yr Play Room	Wall		Plaster	White	0.01	0.04	4.0	8/31/99	Any lead present is 4 to 5 layers deep
V99C5119	School 138	190	4-5 yr Play Room	Wall	Radiator	Wood	Pink	0.25	0.13	2.2	8/31/99	Any lead present is 2 layers deep
V99C5120	School 138	191	4-5 yr Play Room	Wall	Baseboard	Wood	Pink	0.18	0.10	1.7	8/31/99	Any lead present is 2 layers deep
V99C5121	School 138	192	5-6 yr Play Room	Wall		Plaster	Green	0.12	0.06	1.3	8/31/99	Any lead present is on the surface layer
V99C5122	School 138	193	5-6 yr Play Room	Wall		Plaster	White	0.00	0.01	1.0	8/31/99	No lead present
V99C5123	School 138	194	5-6 yr Play Room	Door	Casing	Wood	White	0.03	0.55	1.0	8/31/99	Any lead present is on the surface layer
V99C5124	School 138	195	5-6 yr Play Room	Door	Casing	Wood	White	0.10	0.11	1.9	8/31/99	Any lead present is 2 layers deep
V99C5125	School 138	196	5-6 yr Play Room	Door	Baseboard	Wood	Orange	>>5.0	1.00	2.7	8/31/99	Any lead present is 2 to 3 layers deep
V99C5126	School 138	197	5-6 yr Play Room	Door	Baseboard	Wood	Orange	>>5.0	1.00	2.9	8/31/99	Any lead present is 2 to 3 layers deep
V99C5127	School 138	198	5-6 yr Play Room		toy, block	Wood	Red	0.15	0.09	1.5	8/31/99	Any lead present is on the surface layer
V99C5128	School 138	199	5-6 yr Play Room		toy, block	Wood	Red	0.12	0.08	1.4	8/31/99	Any lead present is on the surface layer
V99C5129	School 138	200	5-6 yr Play Room		toy, block	Wood	Yellow	1.68	0.17	1.1	8/31/99	Any lead present is on the surface layer
V99C5130	School 138	201	5-6 yr Play Room		toy, block	Wood	Blue	0.02	0.14	1.5	8/31/99	Any lead present is on the surface layer
V99C5131	School 138	202	5-6 yr Play Room		toy, block	Wood	Blue	0.06	0.31	2.7	8/31/99	Any lead present is 2 to 3 layers deep
V99C5132	School 138	203	5-6 yr Play Room		toy, block	Wood	Green	0.07	0.04	1.0	8/31/99	Any lead present is on the surface layer
V99C5133	School 138	204	5-6 yr Play Room	Cabinet	Shelf	Wood	White	0.08	0.06	1.2	8/31/99	Any lead present is on the surface layer
V99C5134	School 138	205	Dining Room	Wall		Plaster	Other	0.00	0.06	1.0	8/31/99	No lead present
V99C5135	School 138	206	Dining Room	Door	Door	Wood	White	0.05	0.07	1.1	8/31/99	Any lead present is on the surface layer
V99C5136	School 138	207	Dining Room	Door	Jamb	Wood	Orange	0.70	0.23	2.8	8/31/99	Any lead present is 2 to 3 layers deep
V99C5137	School 138	208	Dining Room	Wall		Wood	Green	0.09	0.07	1.4	8/31/99	Any lead present is on the

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												surface layer
V99C5138	School 138	209	Dining Room	Window	Casing	Wood	White	0.09	0.10	2.0	8/31/99	Any lead present is 2 layers deep
V99C5139	School 138	210	Dining Room	Window	Sash	Wood	White	0.12	0.08	1.6	8/31/99	Any lead present is on the surface layer
V99C5140	School 138	211	Dining Room	Wall		Plaster	Green	0.12	0.07	1.4	8/31/99	Any lead present is on the surface layer
V99C5141	School 138	212	Dining Room	Wall		Plaster	White	0.03	0.09	6.0	8/31/99	Any lead present is 4 to 5 layers deep
V99C5142	School 138	213	Dining Room		Chair	Metal	Blue	0.05	0.04	1.3	8/31/99	Any lead present is on the surface layer
V99C5143	School 138	214	Dining Room		Chair	Wood	Grey	0.08	0.03	1.0	8/31/99	Any lead present is on the surface layer
V99C5144	School 138	215	Sports Room	Wall		Plaster	Pink	0.24	0.11	2.2	8/31/99	Any lead present is 2 layers deep
V99C5145	School 138	216	Sports Room	Wall		Plaster	White	0.02	0.12	3.8	8/31/99	Any lead present is 4 to 5 layers deep
V99C5146	School 138	217	Sports Room	Wall	Baseboard	Wood	Orange	0.07	0.05	1.2	8/31/99	Any lead present is on the surface layer
V99C5147	School 138	218	Sports Room	Window	Casing	Wood	White	0.08	0.07	1.7	8/31/99	Any lead present is 2 layers deep
V99C5148	School 138	219	Sports Room		toy, block	Metal	Yellow	0.04	0.09	2.2	8/31/99	Any lead present is 2 layers deep
V99C5149	School 138	220	Sports Room		toy, block	Metal	Green	0.84	0.17	1.1	8/31/99	Any lead present is on the surface layer
V99C5150	School 138	221	Sports Room		toy, block	Wood	Blue	0.04	0.02	1.0	8/31/99	Any lead present is on the surface layer
V99C5151	School 138	222	Sports Room		toy, block	Wood	Green	0.25	0.07	1.1	8/31/99	Any lead present is on the surface layer
V99C5152	School 138	223	Sports Room		toy, block	Wood	Orange	0.08	0.33	10.0	8/31/99	Any lead present is 4 to 5 layers deep
V99C5153	School 138	224	Sports Room	Stairs	Rail-cap	Wood	Brown	0.03	0.10	1.0	8/31/99	Any lead present is on the surface layer
V99C5154	School 138	225	3-4 yr Play Room	Wall		Plaster	Green	0.29	0.13	2.3	8/31/99	Any lead present is 2 to 3 layers deep
V99C5155	School 138	226	3-4 yr Play Room	Wall		Plaster	White	0.00	0.08	1.0	8/31/99	No lead present
V99C5156	School 138	227	3-4 yr Play Room	Door	Casing	Wood	White	0.08	0.08	1.1	8/31/99	Any lead present is on the

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												surface layer
V99C5157	School 138	228	3-4 yr Play Room	Door	Jamb	Wood	Orange	0.10	0.07	1.4	8/31/99	Any lead present is on the surface layer
V99C5158	School 138	229	3-4 yr Play Room	Door	Door	Wood	White	0.03	0.05	1.0	8/31/99	Any lead present is on the surface layer
V99C5159	School 138	230	3-4 yr Play Room	Window	Casing	Wood	White	0.07	0.05	1.3	8/31/99	Any lead present is on the surface layer
V99C5160	School 138	231	3-4 yr Play Room	Window	Sash	Wood	White	0.05	0.05	1.0	8/31/99	Any lead present is on the surface layer
V99C5161	School 138	232	3-4 yr Play Room		Radiator	Metal	Green	0.12	0.07	1.4	8/31/99	Any lead present is on the surface layer
V99C5162	School 138	233	3-4 yr Play Room	Wall		Plaster	Green	0.18	0.08	1.6	8/31/99	Any lead present is on the surface layer
V99C5163	School 138	234	3-4 yr Play Room	Wall		Plaster	White	0.00	0.03	1.0	8/31/99	No lead present
V99C5164	School 138	235	3-4 yr Play Room	Window	Casing	Wood	White	0.13	0.11	2.3	8/31/99	Any lead present is 2 to 3 layers deep
V99C5165	School 138	236	3-4 yr Play Room	Cabinet	Door-Out	Wood	White	0.01	0.02	1.0	8/31/99	Any lead present is on the surface layer
V99C5166	School 138	237	3-4 yr Play Room	Door	Casing	Wood	White	0.09	0.10	1.8	8/31/99	Any lead present is 2 layers deep
V99C5167	School 138	238	3-4 yr Play Room	Wall		Plaster	Green	0.26	0.13	2.9	8/31/99	Any lead present is 2 to 3 layers deep
V99C5168	School 138	239	3-4 yr Play Room	Window	Casing	Wood	White	0.10	0.10	1.6	8/31/99	Any lead present is on the surface layer
V99C5169	School 138	240	6-7 yr Play Room	Wall		Plaster	Blue	0.10	0.05	1.1	8/31/99	Any lead present is on the surface layer
V99C5170	School 138	241	6-7 yr Play Room	Wall		Plaster	White	0.15	0.21	3.3	8/31/99	Any lead present is 2 to 3 layers deep
V99C5171	School 138	242	6-7 yr Play Room	Wall		Plaster	Pink	0.18	0.09	1.8	8/31/99	Any lead present is 2 layers deep
V99C5172	School 138	243	6-7 yr Play Room	Door	Casing	Wood	White	0.05	0.06	1.1	8/31/99	Any lead present is on the surface layer
V99C5173	School 138	244	6-7 yr Play Room	Door	Jamb	Wood	Orange	0.15	0.07	1.3	8/31/99	Any lead present is on the surface layer
V99C5174	School 138	245	6-7 yr Play Room	Window	Casing	Wood	White	0.07	0.05	1.2	8/31/99	Any lead present is on the surface layer
V99C5175	School 138	246	6-7 yr Play Room	Window	Sash	Wood	White	0.05	0.06	1.1	8/31/99	Any lead present is on the

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												surface layer
V99C5176	School 138	247	6-7 yr Play Room		Radiator	Wood	Pink	0.08	0.07	1.3	8/31/99	Any lead present is on the surface layer
V99C5177	School 138	248	6-7 yr Play Room		toy, block	Metal	Yellow	0.76	0.16	1.3	8/31/99	Any lead present is on the surface layer
V99C5178	School 138	249	6-7 yr Play Room		Chair	Metal	Grey	0.11	0.02	1.0	8/31/99	Any lead present is on the surface layer
V99C5179	School 138	250	6-7 yr Play Room		Chair	Wood	Green	0.20	0.12	1.1	8/31/99	Any lead present is on the surface layer
V99C5180	School 138	251	6-7 yr Play Room	Outside	hand rail	Metal	Pink	1.57	0.19	1.4	8/31/99	Any lead present is on the surface layer
V99C5181	School 138	252	6-7 yr Play Room	Playground Equipment		Metal	Pink	1.10	0.15	1.2	8/31/99	Any lead present is on the surface layer
V99C5182	School 138	253	6-7 yr Play Room	Playground Equipment		Metal	Blue	0.48	0.09	1.3	8/31/99	Any lead present is on the surface layer
V99C5183	School 138	254	6-7 yr Play Room	Playground Equipment		Metal	Blue	0.03	0.02	1.0	8/31/99	Any lead present is on the surface layer
V99C5184	School 138	255	6-7 yr Play Room	Playground Equipment		Wood	Green	0.01	0.11	1.5	8/31/99	Any lead present is on the surface layer
V99C5185	School 138	256	6-7 yr Play Room	Playground Equipment		Wood	Green	0.03	0.08	1.6	8/31/99	Any lead present is on the surface layer
V99C5186	School 138	257	6-7 yr Play Room	Playground Equipment		Wood	Orange	0.57	0.10	1.3	8/31/99	Any lead present is on the surface layer
V99C5187	School 138	258	6-7 yr Play Room	Playground Equipment		Metal	Blue	1.80	0.41	2.3	8/31/99	Any lead present is 2 to 3 layers deep
V99C5188	School 138	259	6-7 yr Play Room	Playground Equipment		Metal	Yellow	0.15	0.04	1.0	8/31/99	Any lead present is on the surface layer
V99C5189	School 138	260	6-7 yr Play Room	Bench		Wood	Red	0.27	0.04	1.0	8/31/99	Any lead present is on the surface layer
V99C5190	School 138	261	6-7 yr Play Room	Bench		Wood	Green	3.44	0.30	2.4	8/31/99	Any lead present is 2 to 3 layers deep
V99C5191	School 138	262	6-7 yr Play Room	Bench		Wood	Blue	0.13	0.03	1.0	8/31/99	Any lead present is on the surface layer
V99C5192	School 132	263	Calibration					0.60	0.00	0.0	8/31/99	Any lead present is on the surface layer
V99C5193	School 132	264	2-3 yr Play Room	Wall		Plaster	Beige	0.71	0.27	2.6	8/31/99	Any lead present is 2 to 3 layers deep

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5194	School 132	265	2-3 yr Play Room	Wall		Plaster	Beige	0.59	0.17	2.1	8/31/99	Any lead present is 2 layers deep
V99C5195	School 132	266	2-3 yr Play Room	Wall		Plaster	Other	0.00	0.03	1.0	8/31/99	No lead present
V99C5196	School 132	267	2-3 yr Play Room	Wall		Plaster	Green	0.05	0.08	1.2	8/31/99	Any lead present is on the surface layer
V99C5197	School 132	268	2-3 yr Play Room	Cabinet	Door-Ins	Wood	Green	0.25	0.10	1.9	8/31/99	Any lead present is 2 layers deep
V99C5198	School 132	269	2-3 yr Play Room		Baseboard	Wood	Orange	1.39	0.17	1.6	8/31/99	Any lead present is on the surface layer
V99C5199	School 132	270	2-3 yr Play Room		Chair	Wood	Yellow	0.81	0.05	1.0	8/31/99	Any lead present is on the surface layer
V99C5200	School 132	271	2-3 yr Play Room		Chair	Wood	Yellow	0.53	0.11	1.5	8/31/99	Any lead present is on the surface layer
V99C5201	School 132	272	2-3 yr Play Room	Window	Casing	Wood	White	0.10	0.25	2.9	8/31/99	Any lead present is 2 to 3 layers deep
V99C5202	School 132	273	2-3 yr Play Room		toy, block	Wood	Yellow	1.43	0.20	1.1	8/31/99	Any lead present is on the surface layer
V99C5203	School 132	274	2-3 yr Play Room		toy, ladybug	Metal	Red	0.07	0.05	1.1	8/31/99	Any lead present is on the surface layer
V99C5204	School 132	275	2-3 yr Play Room	Cabinet	Wall	Metal	Orange	0.05	0.03	1.0	8/31/99	Any lead present is on the surface layer
V99C5205	School 132	276	2-3 yr Play Room	Piano		Metal	Black	0.34	0.13	1.5	8/31/99	Any lead present is on the surface layer
V99C5206	School 132	277	2-3 yr Play Room	Window	Casing	Wood	White	0.03	0.08	1.6	8/31/99	Any lead present is on the surface layer
V99C5207	School 132	278	2-3 yr Play Room	Window	Sash	Wood	White	0.16	0.14	2.3	8/31/99	Any lead present is 2 to 3 layers deep
V99C5208	School 132	279	2-3 yr Play Room	Wall		Plaster	Other	0.05	0.10	10.0	8/31/99	Any lead present is 4 to 5 layers deep
V99C5209	School 132	280	2-3 yr Play Room	Door	Door	Wood	White	0.18	0.09	2.0	8/31/99	Any lead present is 2 layers deep
V99C5210	School 132	281	2-3 yr Play Room		Baseboard	Wood	Green	0.20	0.10	1.8	8/31/99	Any lead present is 2 layers deep
V99C5211	School 132	282	2-3 yr Play Room		Baseboard	Wood	Orange	0.17	0.07	1.4	8/31/99	Any lead present is on the surface layer
V99C5212	School 132	283	2-3 yr Play Room		toy, block	Wood	Green	0.09	0.03	1.0	8/31/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm^2)	± (mg/cm^2)	Depth Index	Date	Note
V99C5213	School 132	284	2-3 yr Play Room		toy, block	Wood	Red	0.02	0.15	1.4	8/31/99	Any lead present is on the surface layer
V99C5214	School 132	285	2-3 yr Play Room		toy, block	Wood	Blue	0.04	0.13	1.8	8/31/99	Any lead present is 2 layers deep
V99C5215	School 132	286	2-3 yr Play Room		toy, block	Wood	Yellow	0.30	0.04	1.0	8/31/99	Any lead present is on the surface layer
V99C5216	School 132	287	2-3 yr Play Room		toy, block	Wood	Green	0.05	0.17	7.8	8/31/99	Any lead present is 4 to 5 layers deep
V99C5217	School 132	288	2-3 yr Play Room		toy, block	Wood	Blue	0.03	0.18	3.2	8/31/99	Any lead present is 2 to 3 layers deep
V99C5218	School 132	289	2-3 yr Play Room		toy, block	Metal	Blue	0.17	0.04	1.0	8/31/99	Any lead present is on the surface layer
V99C5219	School 132	290	2-3 yr Play Room	Cabinet	Shelf	Wood	Green	0.04	0.05	1.1	8/31/99	Any lead present is on the surface layer
V99C5220	School 132	291	2-3 yr Play Room	Window	Casing	Wood	White	0.13	0.09	1.7	8/31/99	Any lead present is 2 layers deep
V99C5221	School 132	292	2-3 yr Play Room	Window	Sash	Wood	White	0.03	0.05	1.0	8/31/99	Any lead present is on the surface layer
V99C5222	School 132	293	2-3 yr Play Room	Door	Casing	Wood	White	0.21	0.21	3.5	8/31/99	Any lead present is 2 to 3 layers deep
V99C5223	School 132	294	2-3 yr Play Room	Door	Door	Wood	White	0.02	0.04	1.0	8/31/99	Any lead present is on the surface layer
V99C5224	School 132	295	2-3 yr Play Room		Baseboard	Wood	Orange	1.11	0.42	2.4	8/31/99	Any lead present is 2 to 3 layers deep
V99C5225	School 132	296	2-3 yr Play Room		Baseboard	Wood	Orange	1.07	0.21	2.3	8/31/99	Any lead present is 2 to 3 layers deep
V99C5226	School 132	297	2-3 yr Play Room	Window	Casing	Wood	White	0.01	0.04	1.0	8/31/99	Any lead present is on the surface layer
V99C5227	School 132	298	2-3 yr Play Room	Window	Sash	Wood	White	0.07	0.06	1.6	8/31/99	Any lead present is on the surface layer
V99C5228	School 132	299	2-3 yr Play Room		Chair	Wood	Red	0.00	0.17	1.0	8/31/99	No lead present
V99C5229	School 132	300	2-3 yr Play Room		Chair	Wood	Blue	0.01	0.12	1.0	8/31/99	Any lead present is on the surface layer
V99C5230	School 132	301	4-5 yr Play Room	Wall		Wood	Pink	0.29	0.30	4.5	8/31/99	Any lead present is 4 to 5 layers deep
V99C5231	School 132	302	4-5 yr Play Room		toy, block	Wood	Red	0.00	0.01	1.0	8/31/99	No lead present
V99C5232	School 132	303	4-5 yr Play Room		toy, block	Wood	Blue	0.07	0.13	7.6	8/31/99	Any lead present is 4 to 5

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												layers deep
V99C5233	School 132	304	4-5 yr Play Room		toy, block	Wood	Blue	0.00	0.01	1.0	8/31/99	No lead present
V99C5234	School 132	305	4-5 yr Play Room		toy, block	Wood	Yellow	0.43	0.06	1.0	8/31/99	Any lead present is on the surface layer
V99C5235	School 132	306	4-5 yr Play Room		toy, block	Wood	Yellow	0.02	0.03	1.0	8/31/99	Any lead present is on the surface layer
V99C5236	School 132	307	4-5 yr Play Room		toy, block	Wood	Pink	0.25	0.14	1.4	8/31/99	Any lead present is on the surface layer
V99C5237	School 132	308	Exterior	Wall		Plaster	White	0.00	0.07	1.0	8/31/99	No lead present
V99C5238	School 132	309	Exterior	Wall		Plaster	Black	0.01	0.14	1.6	8/31/99	Any lead present is on the surface layer
V99C5239	School 132	310	Exterior	Window	Casing	Metal	Blue	0.21	0.10	1.8	8/31/99	Any lead present is 2 layers deep
V99C5240	School 132	311	Exterior	Playground Equipment	Giraffe	Metal	Yellow	>>5.0	1.00	2.0	8/31/99	Any lead present is 2 layers deep
V99C5241	School 132	312	Exterior	Playground Equipment	Giraffe	Metal	Yellow	4.20	1.90	1.8	8/31/99	Any lead present is 2 layers deep
V99C5242	School 132	313	Exterior	Playground Equipment		Metal	Blue	1.36	0.22	1.2	8/31/99	Any lead present is on the surface layer
V99C5243	School 132	314	Exterior	Playground Equipment		Metal	Blue	2.07	0.49	1.6	8/31/99	Any lead present is on the surface layer
V99C5244	School 132	315	Exterior	Playground Equipment		Metal	Yellow	2.49	0.39	1.7	8/31/99	Any lead present is 2 layers deep
V99C5245	School 132	316	Exterior	Bench		Wood	Green	0.04	0.05	1.2	8/31/99	Any lead present is on the surface layer
V99C5246	School 132	317	Exterior	Playground Equipment		Metal	Yellow	3.17	0.40	1.8	8/31/99	Any lead present is 2 layers deep
V99C5247	School 132	318	Exterior	Stairs		Metal	Blue	0.20	0.17	2.4	8/31/99	Any lead present is 2 to 3 layers deep
V99C5248	School 132	319	Exterior	Stairs		Concrete	Blue	0.03	0.09	1.4	8/31/99	Any lead present is on the surface layer
V99C5249	School 132	320	Exterior	Playground Equipment		Metal	Red	0.10	0.07	1.2	8/31/99	Any lead present is on the surface layer
V99C5250	School 132	321	Exterior	Playground Equipment		Metal	Yellow	0.86	0.16	1.5	8/31/99	Any lead present is on the surface layer
V99C5251	School 132	322	Exterior	Playground Equipment		Metal	Yellow	4.11	1.99	1.8	8/31/99	Any lead present is 2 layers deep

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5252	School 132	323	Exterior	Playground Equipment		Metal	Green	1.85	0.47	2.7	8/31/99	Any lead present is 2 to 3 layers deep
V99C5253	School 132	324	Exterior	Playground Equipment		Metal	Beige	2.74	0.91	2.4	8/31/99	Any lead present is 2 to 3 layers deep
V99C5254	School 132	325	Exterior	Door	Door	Wood	Green	0.15	0.06	1.0	8/31/99	Any lead present is on the surface layer
V99C5255	School 109	326	Calibration					0.60	0.00	0.0	9/1/99	Any lead present is on the surface layer
V99C5256	School 109	327	2-3 yr Play Room	Wall		Plaster	Pink	0.31	0.09	1.8	9/1/99	Any lead present is 2 layers deep
V99C5257	School 109	328	2-3 yr Play Room	Wall		Plaster	Pink	0.19	0.08	1.5	9/1/99	Any lead present is on the surface layer
V99C5258	School 109	329	2-3 yr Play Room	Wall		Plaster	White	0.02	0.09	1.6	9/1/99	Any lead present is on the surface layer
V99C5259	School 109	330	2-3 yr Play Room	Wall		Plaster	Other	0.02	0.05	1.7	9/1/99	Any lead present is 2 layers deep
V99C5260	School 109	331	2-3 yr Play Room	Wall	Radiator	Wood	Pink	0.26	0.05	1.8	9/1/99	Any lead present is 2 layers deep
V99C5261	School 109	332	2-3 yr Play Room	Window	Casing	Wood	White	0.08	0.06	1.2	9/1/99	Any lead present is on the surface layer
V99C5262	School 109	333	2-3 yr Play Room	Window	Sash	Wood	White	0.05	0.03	1.0	9/1/99	Any lead present is on the surface layer
V99C5263	School 109	334	2-3 yr Play Room	Wall	Chair	Wood	Pink	0.09	0.03	1.0	9/1/99	Any lead present is on the surface layer
V99C5264	School 109	335	2-3 yr Play Room		desk	Wood	Yellow	2.14	0.25	1.2	9/1/99	Any lead present is on the surface layer
V99C5265	School 109	336	2-3 yr Play Room		rocking horse	Wood	Beige	1.20	0.22	2.4	9/1/99	Any lead present is 2 to 3 layers deep
V99C5266	School 109	337	2-3 yr Play Room		rocking horse	Wood	Beige	0.08	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5267	School 109	338	2-3 yr Play Room		toy, block	Wood	Green	0.01	0.17	1.0	9/1/99	Any lead present is on the surface layer
V99C5268	School 109	339	2-3 yr Play Room	Door	Door	Wood	White	0.18	0.13	3.0	9/1/99	Any lead present is 2 to 3 layers deep
V99C5269	School 109	340	2-3 yr Play Room	Door	Casing	Wood	White	0.08	0.06	1.4	9/1/99	Any lead present is on the surface layer
V99C5270	School 109	341	2-3 yr Play Room		Baseboard	Wood	Pink	0.86	0.15	1.9	9/1/99	Any lead present is 2

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												layers deep
V99C5271	School 109	342	2-3 yr Play Room		Baseboard	Wood	Pink	0.54	0.14	1.5	9/1/99	Any lead present is on the surface layer
V99C5272	School 109	343	5-6 yr Play Room	Wall		Plaster	White	0.01	0.11	1.6	9/1/99	Any lead present is on the surface layer
V99C5273	School 109	344	5-6 yr Play Room	Wall		Plaster	Pink	0.25	0.29	5.3	9/1/99	Any lead present is 4 to 5 layers deep
V99C5274	School 109	345	5-6 yr Play Room	Door	Door	Wood	White	0.25	0.10	2.0	9/1/99	Any lead present is 2 layers deep
V99C5275	School 109	346	5-6 yr Play Room	Door	Casing	Wood	White	0.10	0.10	2.1	9/1/99	Any lead present is 2 layers deep
V99C5276	School 109	347	5-6 yr Play Room	Cabinet		Wood	White	0.12	0.06	1.3	9/1/99	Any lead present is on the surface layer
V99C5277	School 109	348	5-6 yr Play Room	Cabinet		Wood	Yellow	0.09	0.06	1.1	9/1/99	Any lead present is on the surface layer
V99C5278	School 109	349	5-6 yr Play Room		toy, block	Wood	Blue	0.17	0.07	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5279	School 109	350	5-6 yr Play Room		toy, block	Wood	Red	2.04	0.23	1.4	9/1/99	Any lead present is on the surface layer
V99C5280	School 109	351	5-6 yr Play Room		toy, block	Wood	Red	0.42	0.11	2.0	9/1/99	Any lead present is 2 layers deep
V99C5281	School 109	352	5-6 yr Play Room		Baseboard	Wood	Pink	0.69	0.11	1.7	9/1/99	Any lead present is 2 layers deep
V99C5282	School 109	353	5-6 yr Play Room	Window	Casing	Wood	White	0.04	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5283	School 109	354	5-6 yr Play Room	Window	Sash	Wood	White	0.04	0.07	1.2	9/1/99	Any lead present is on the surface layer
V99C5284	School 109	355	4-5 yr Play Room	Wall		Plaster	White	0.03	0.10	5.0	9/1/99	Any lead present is 4 to 5 layers deep
V99C5285	School 109	356	4-5 yr Play Room	Wall		Plaster	Yellow	0.18	0.06	1.9	9/1/99	Any lead present is 2 layers deep
V99C5286	School 109	357	4-5 yr Play Room		Chair	Wood	Yellow	0.15	0.05	1.4	9/1/99	Any lead present is on the surface layer
V99C5287	School 109	358	4-5 yr Play Room		Baseboard	Wood	Red	0.93	0.16	2.0	9/1/99	Any lead present is 2 layers deep
V99C5288	School 109	359	4-5 yr Play Room	Window	Casing	Wood	White	0.05	0.11	1.2	9/1/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5289	School 109	360	4-5 yr Play Room	Door	Door	Wood	White	0.03	0.33	1.6	9/1/99	Any lead present is on the surface layer
V99C5290	School 109	361	4-5 yr Play Room		toy, block	Wood	Green	0.34	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5291	School 109	362	4-5 yr Play Room		toy, block	Wood	Green	0.17	0.19	2.0	9/1/99	Any lead present is 2 layers deep
V99C5292	School 109	363	4-5 yr Play Room		toy, block	Wood	Blue	0.12	0.11	1.0	9/1/99	Any lead present is on the surface layer
V99C5293	School 109	364	Calibration					0.61	0.00	0.0	9/1/99	Any lead present is on the surface layer
V99C5294	School 109	365	4-5 yr Play Room	Wall		Plaster	White	0.70	0.27	8.3	9/1/99	Any lead present is 4 to 5 layers deep
V99C5295	School 109	366	4-5 yr Play Room	Wall		Plaster	Pink	0.17	0.05	1.8	9/1/99	Any lead present is 2 layers deep
V99C5296	School 109	367	4-5 yr Play Room	Door	Casing	Wood	White	0.18	0.33	2.6	9/1/99	Any lead present is 2 to 3 layers deep
V99C5297	School 109	368	4-5 yr Play Room		Baseboard	Wood	Brown	1.09	0.19	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5298	School 109	369	4-5 yr Play Room	Cabinet		Wood	White	0.02	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5299	School 109	370	4-5 yr Play Room		Chair	Wood	White	0.09	0.05	1.2	9/1/99	Any lead present is on the surface layer
V99C5300	School 109	371	4-5 yr Play Room	Window	Casing	Wood	White	0.05	0.11	1.1	9/1/99	Any lead present is on the surface layer
V99C5301	School 109	372	4-5 yr Play Room	Window	Sash	Wood	White	0.06	0.04	1.2	9/1/99	Any lead present is on the surface layer
V99C5302	School 109	373	4-5 yr Play Room	Cabinet		Wood	Pink	0.02	0.17	1.9	9/1/99	Any lead present is 2 layers deep
V99C5303	School 109	374	4-5 yr Play Room		toy, block	Wood	Blue	0.04	0.05	1.2	9/1/99	Any lead present is on the surface layer
V99C5304	School 109	375	4-5 yr Play Room		toy, block	Wood	Green	2.74	0.23	1.3	9/1/99	Any lead present is on the surface layer
V99C5305	School 109	376	4-5 yr Play Room		toy, block	Wood	Green	0.37	0.05	1.0	9/1/99	Any lead present is on the surface layer
V99C5306	School 109	377	4-5 yr Play Room	Cabinet		Wood	Blue	0.41	0.10	2.0	9/1/99	Any lead present is 2 layers deep
V99C5307	School 109	378	5-6 yr Play Room	Wall		Plaster	White	0.13	0.25	6.7	9/1/99	Any lead present is 4 to 5

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												layers deep
V99C5308	School 109	379	5-6 yr Play Room	Wall		Plaster	White	0.13	0.25	6.7	9/1/99	Any lead present is 4 to 5 layers deep
V99C5309	School 109	380	5-6 yr Play Room	Wall		Plaster	Green	0.16	0.12	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5310	School 109	381	5-6 yr Play Room	Door	Door	Wood	White	0.10	0.06	1.7	9/1/99	Any lead present is 2 layers deep
V99C5311	School 109	382	5-6 yr Play Room	Window	Casing	Wood	White	0.13	0.08	1.7	9/1/99	Any lead present is 2 layers deep
V99C5312	School 109	383	5-6 yr Play Room	Window	Sash	Wood	White	0.16	0.17	2.4	9/1/99	Any lead present is 2 to 3 layers deep
V99C5313	School 109	384	5-6 yr Play Room		Chair	Wood	Green	0.29	0.08	2.8	9/1/99	Any lead present is 2 to 3 layers deep
V99C5314	School 109	385	5-6 yr Play Room	Cabinet		Wood	Blue	0.65	0.21	4.4	9/1/99	Any lead present is 4 to 5 layers deep
V99C5315	School 109	386	5-6 yr Play Room	Cabinet	Radiator	Wood	Green	0.15	0.08	1.7	9/1/99	Any lead present is 2 layers deep
V99C5316	School 109	387	5-6 yr Play Room		play house	Wood	Yellow	1.30	0.15	1.0	9/1/99	Any lead present is on the surface layer
V99C5317	School 109	388	5-6 yr Play Room		shelves	Wood	Yellow	>>5.0	1.00	1.9	9/1/99	Any lead present is 2 layers deep
V99C5318	School 109	389	3-4 yr Play Room	Wall		Plaster	Pink	0.11	0.07	1.7	9/1/99	Any lead present is 2 layers deep
V99C5319	School 109	390	3-4 yr Play Room	Wall		Plaster	White	0.02	0.07	1.9	9/1/99	Any lead present is 2 layers deep
V99C5320	School 109	391	3-4 yr Play Room	Window	Casing	Wood	White	0.12	0.09	2.0	9/1/99	Any lead present is 2 layers deep
V99C5321	School 109	392	3-4 yr Play Room	Window	Sash	Wood	White	0.03	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5322	School 109	393	3-4 yr Play Room		Baseboard	Wood	Red	1.48	0.28	1.9	9/1/99	Any lead present is 2 layers deep
V99C5323	School 109	394	3-4 yr Play Room		Chair	Wood	Yellow	0.20	0.08	1.5	9/1/99	Any lead present is on the surface layer
V99C5324	School 109	395	3-4 yr Play Room	Cabinet		Wood	White	0.08	0.05	1.6	9/1/99	Any lead present is on the surface layer
V99C5325	School 109	396	3-4 yr Play Room		toy, kitchen set	Metal	Blue	0.02	0.05	1.0	9/1/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm^2)	± (mg/cm^2)	Depth Index	Date	Note
V99C5326	School 109	397	3-4 yr Play Room		toy, horse	Wood	Red	0.10	0.03	1.0	9/1/99	Any lead present is on the surface layer
V99C5327	School 109	398	3-4 yr Play Room		toy, horse	Wood	Grey	0.00	0.01	1.0	9/1/99	No lead present
V99C5328	School 109	399	Exterior	Window	Sash-Ext	Metal	Green	0.40	0.14	3.2	9/1/99	Any lead present is 2 to 3 layers deep
V99C5329	School 109	400	Exterior	Playground Equipment		Metal	Yellow	3.12	0.36	1.2	9/1/99	Any lead present is on the surface layer
V99C5330	School 109	401	Exterior	Playground Equipment		Metal	Yellow	3.20	0.83	1.7	9/1/99	Any lead present is 2 layers deep
V99C5331	School 109	402	Exterior	Playground Equipment		Metal	Yellow	>>5.0	1.00	1.3	9/1/99	Any lead present is on the surface layer
V99C5332	School 109	403	Exterior	Swing-Set		Metal	Green	0.40	0.09	1.0	9/1/99	Any lead present is on the surface layer
V99C5333	School 109	404	Exterior	Swing-Set		Metal	Green	1.27	0.17	1.0	9/1/99	Any lead present is on the surface layer
V99C5334	School 109	405	Exterior	Playground Equipment		Metal	Yellow	1.09	0.16	1.5	9/1/99	Any lead present is on the surface layer
V99C5335	School 109	406	Exterior	Playground Equipment		Metal	Green	1.01	0.10	1.1	9/1/99	Any lead present is on the surface layer
V99C5336	School 109	407	Exterior	Playground Equipment		Wood	Yellow	1.10	0.14	1.5	9/1/99	Any lead present is on the surface layer
V99C5337	School 109	408	Exterior	Playground Equipment		Wood	Blue	1.56	0.27	1.8	9/1/99	Any lead present is 2 layers deep
V99C5338	School 109	409	Exterior	Playground Equipment		Wood	Blue	0.67	0.17	1.6	9/1/99	Any lead present is on the surface layer
V99C5339	School 109	410	Exterior	Playground Equipment		Wood	Red	0.04	0.04	1.1	9/1/99	Any lead present is on the surface layer
V99C5340	School 109	411	Exterior	Playground Equipment		Wood	Green	0.30	0.08	1.2	9/1/99	Any lead present is on the surface layer
V99C5341	School 109	412	Exterior	Playground Equipment		Wood	Blue	0.04	0.04	1.1	9/1/99	Any lead present is on the surface layer
V99C5342	School 109	413	Exterior	Playground Equipment		Wood	Pink	0.01	0.05	3.1	9/1/99	Any lead present is 2 to 3 layers deep
V99C5343	School 109	414	Exterior	Playground Equipment		Wood	Yellow	2.15	0.30	1.6	9/1/99	Any lead present is on the surface layer
V99C5344	School 109	415	Exterior	Playground Equipment		Wood	Blue	0.32	0.09	2.0	9/1/99	Any lead present is 2 layers deep

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5345	School 109	416	Exterior	Playground Equipment		Wood	Red	0.69	0.17	1.9	9/1/99	Any lead present is 2 layers deep
V99C5346	School 109	417	Exterior	Playground Equipment		Wood	Blue	0.14	0.08	1.8	9/1/99	Any lead present is 2 layers deep
V99C5347	School 109	418	Exterior	Playground Equipment		Metal	Blue	2.26	0.44	5.2	9/1/99	Any lead present is 4 to 5 layers deep
V99C5348	School 109	419	Calibration					0.63	0.00	0.0	9/1/99	Any lead present is on the surface layer
V99C5349	School 162	420	2-3 yr Play Room	Wall		Plaster	White	0.00	0.04	1.0	9/1/99	No lead present
V99C5350	School 162	421	2-3 yr Play Room	Wall		Plaster	Beige	0.17	0.08	1.3	9/1/99	Any lead present is on the surface layer
V99C5351	School 162	422	2-3 yr Play Room	Door	Door	Wood	White	0.04	0.06	1.1	9/1/99	Any lead present is on the surface layer
V99C5352	School 162	423	2-3 yr Play Room	Door	Casing	Wood	White	0.08	0.17	2.0	9/1/99	Any lead present is 2 layers deep
V99C5353	School 162	424	2-3 yr Play Room		Baseboard	Wood	Beige	0.03	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5354	School 162	425	2-3 yr Play Room	Window	Casing	Wood	White	0.06	0.07	1.3	9/1/99	Any lead present is on the surface layer
V99C5355	School 162	426	2-3 yr Play Room	Window	Sash	Wood	White	0.02	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5356	School 162	427	2-3 yr Play Room	Cabinet		Wood	White	0.11	0.08	1.4	9/1/99	Any lead present is on the surface layer
V99C5357	School 162	428	2-3 yr Play Room		toy, block	Wood	Yellow	0.78	0.15	1.1	9/1/99	Any lead present is on the surface layer
V99C5358	School 162	429	2-3 yr Play Room		toy, block	Wood	Green	1.72	0.23	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5359	School 162	430	2-3 yr Play Room		toy, block	Wood	Yellow	0.59	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5360	School 162	431	2-3 yr Play Room		toy, block	Wood	Yellow	2.21	0.35	2.0	9/1/99	Any lead present is 2 layers deep
V99C5361	School 162	432	2-3 yr Play Room		toy, block	Wood	Red	0.06	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5362	School 162	433	2-3 yr Play Room		toy, block	Wood	Yellow	0.39	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5363	School 162	434	2-3 yr Play Room		toy, block	Wood	Yellow	0.53	0.10	1.0	9/1/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5364	School 162	435	Exterior	Playground Equipment		Metal	Yellow	1.98	0.25	1.2	9/1/99	Any lead present is on the surface layer
V99C5365	School 162	436	Exterior	Playground Equipment		Metal	Blue	0.27	0.06	1.1	9/1/99	Any lead present is on the surface layer
V99C5366	School 162	437	Exterior	Playground Equipment		Metal	Red	0.86	0.09	1.1	9/1/99	Any lead present is on the surface layer
V99C5367	School 162	438	Exterior	Playground Equipment		Metal	Green	3.64	0.33	1.6	9/1/99	Any lead present is on the surface layer
V99C5368	School 162	439	Exterior	Playground Equipment		Metal	Orange	0.84	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5369	School 162	440	Exterior	Playground Equipment		Wood	Blue	0.04	0.04	1.1	9/1/99	Any lead present is on the surface layer
V99C5370	School 162	441	Exterior	Playground Equipment		Metal	Pink	0.06	0.06	1.3	9/1/99	Any lead present is on the surface layer
V99C5371	School 162	442	Exterior	Playground Equipment		Wood	Red	0.13	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5372	School 162	443	Exterior	Playground Equipment		Wood	Green	0.08	0.03	1.0	9/1/99	Any lead present is on the surface layer
V99C5373	School 162	444	Exterior	Playground Equipment		Wood	Green	>>5.0	1.00	1.8	9/1/99	Any lead present is 2 layers deep
V99C5374	School 162	445	Exterior	Playground Equipment		Metal	Yellow	>>5.0	1.79	1.4	9/1/99	Any lead present is on the surface layer
V99C5375	School 162	446	Exterior	Playground Equipment		Metal	Yellow	1.87	0.29	1.2	9/1/99	Any lead present is on the surface layer
V99C5376	School 162	447	Exterior	Playground Equipment		Metal	Green	1.53	0.16	1.1	9/1/99	Any lead present is on the surface layer
V99C5377	School 162	448	Exterior	Playground Equipment		Metal	Yellow	1.02	0.19	1.1	9/1/99	Any lead present is on the surface layer
V99C5378	School 162	449	Exterior	Bench		Wood	Yellow	1.00	0.14	1.2	9/1/99	Any lead present is on the surface layer
V99C5379	School 162	450	Exterior	Bench		Wood	Green	1.19	0.16	1.2	9/1/99	Any lead present is on the surface layer
V99C5380	School 162	451	Exterior		Fence	Metal	Green	0.80	0.17	1.6	9/1/99	Any lead present is on the surface layer
V99C5381	School 162	452	Exterior		Fence	Metal	Blue	0.37	0.24	1.6	9/1/99	Any lead present is on the surface layer
V99C5382	School 162	453	Exterior	Stairs		Concrete	Yellow	0.44	0.19	1.9	9/1/99	Any lead present is 2

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												layers deep
V99C5383	School 162	454	3-4 yr Play Room	Wall		Concrete	White	0.00	0.08	1.0	9/1/99	No lead present
V99C5384	School 162	455	3-4 yr Play Room	Wall		Concrete	Blue	0.31	0.20	3.4	9/1/99	Any lead present is 2 to 3 layers deep
V99C5385	School 162	455	3-4 yr Play Room	Window	Casing	Concrete	White	0.31	0.20	3.4	9/1/99	Any lead present is 2 to 3 layers deep
V99C5386	School 162	457	3-4 yr Play Room	Window	Sash	Concrete	White	0.03	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5387	School 162	458	3-4 yr Play Room	Window	Baseboard	Wood	Brown	0.09	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5388	School 162	459	3-4 yr Play Room	Bench		Wood	Orange	0.04	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5389	School 162	460	3-4 yr Play Room	Door	Door	Wood	White	0.21	0.22	2.9	9/1/99	Any lead present is 2 to 3 layers deep
V99C5390	School 162	461	3-4 yr Play Room		toy, block	Wood	Green	0.17	0.07	1.0	9/1/99	Any lead present is on the surface layer
V99C5391	School 162	462	3-4 yr Play Room		toy, block	Wood	Red	0.01	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5392	School 162	463	3-4 yr Play Room		toy, block	Wood	Red	0.01	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5393	School 162	464	3-4 yr Play Room	Cabinet		Wood	Red	0.05	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5394	School 162	465	3-4 yr Play Room	Wall		Plaster	White	0.00	0.01	1.0	9/1/99	No lead present
V99C5395	School 162	466	3-4 yr Play Room	Wall		Plaster	Blue	0.04	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5396	School 162	467	3-4 yr Play Room	Window	Casing	Plaster	White	0.03	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5397	School 162	468	3-4 yr Play Room	Window	Sash	Plaster	White	0.19	0.55	4.7	9/1/99	Any lead present is 4 to 5 layers deep
V99C5398	School 162	469	3-4 yr Play Room		toy, block	Wood	Green	2.66	0.27	1.2	9/1/99	Any lead present is on the surface layer
V99C5399	School 162	469	3-4 yr Play Room		toy, block	Wood	Green	2.66	0.27	1.2	9/1/99	Any lead present is on the surface layer
V99C5400	School 162	469	3-4 yr Play Room		toy, block	Wood	Red	2.66	0.27	1.2	9/1/99	Any lead present is on the surface layer
V99C5401	School 162	472	3-4 yr Play Room		toy, block	Wood	Red	0.01	0.01	1.0	9/1/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5402	School 162	473	3-4 yr Play Room		toy, block	Wood	Yellow	0.41	0.11	1.0	9/1/99	Any lead present is on the surface layer
V99C5403	School 162	474	3-4 yr Play Room	Cabinet		Wood	Yellow	0.54	0.11	1.0	9/1/99	Any lead present is on the surface layer
V99C5404	School 162	475	3-4 yr Play Room	Cabinet		Wood	Yellow	0.85	0.19	1.0	9/1/99	Any lead present is on the surface layer
V99C5405	School 162	476	3-4 yr Play Room	Cabinet		Wood	Yellow	0.79	0.18	1.0	9/1/99	Any lead present is on the surface layer
V99C5406	School 162	477	3-4 yr Play Room	Cabinet		Wood	Orange	1.12	0.16	1.0	9/1/99	Any lead present is on the surface layer
V99C5407	School 162	478	3-4 yr Play Room		Baseboard	Wood	Yellow	0.30	0.07	1.0	9/1/99	Any lead present is on the surface layer
V99C5408	School 162	479	3-4 yr Play Room	Bench		Wood	Yellow	0.69	0.08	1.0	9/1/99	Any lead present is on the surface layer
V99C5409	School 162	480	3-4 yr Play Room	Window	Casing	Wood	White	0.05	0.09	1.2	9/1/99	Any lead present is on the surface layer
V99C5410	School 162	481	3-4 yr Play Room	Window	Sash	Wood	White	0.10	0.11	1.8	9/1/99	Any lead present is 2 layers deep
V99C5411	School 162	482	3-4 yr Play Room	Wall		Plaster	White	0.00	0.11	1.0	9/1/99	No lead present
V99C5412	School 162	483	3-4 yr Play Room	Wall		Plaster	Blue	0.15	0.16	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5413	School 162	484	3-4 yr Play Room		toy, block	Wood	Green	0.37	0.15	1.0	9/1/99	Any lead present is on the surface layer
V99C5414	School 162	485	3-4 yr Play Room		toy, block	Wood	Green	2.40	0.32	1.2	9/1/99	Any lead present is on the surface layer
V99C5415	School 162	486	3-4 yr Play Room		toy, block	Wood	Red	0.18	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5416	School 162	487	3-4 yr Play Room		toy, block	Wood	Blue	0.03	0.11	1.0	9/1/99	Any lead present is on the surface layer
V99C5417	School 162	487	3-4 yr Play Room		toy, block	Wood	Yellow	0.03	0.11	1.0	9/1/99	Any lead present is on the surface layer
V99C5418	School 162	489	3-4 yr Play Room		toy, block	Wood	Yellow	0.25	0.16	1.2	9/1/99	Any lead present is on the surface layer
V99C5419	School 162	489	3-4 yr Play Room		toy, block	Wood	Yellow	0.25	0.16	1.2	9/1/99	Any lead present is on the surface layer
V99C5420	School 162	491	3-4 yr Play Room		toy, block	Wood	Green	1.24	0.18	1.1	9/1/99	Any lead present is on the surface layer

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5421	School 162	492	3-4 yr Play Room		toy, block		Green	0.00	0.15	1.0	9/1/99	No lead present
V99C5422	School 162	493	5-6 yr Play Room	Wall		Plaster	White	0.00	0.08	1.0	9/1/99	No lead present
V99C5423	School 162	494	5-6 yr Play Room	Wall		Plaster	Green	0.04	0.19	1.7	9/1/99	Any lead present is 2 layers deep
V99C5424	School 162	495	5-6 yr Play Room		toy, block	Wood	Yellow	2.09	0.30	1.1	9/1/99	Any lead present is on the surface layer
V99C5425	School 162	496	5-6 yr Play Room		toy, block	Wood	Green	1.30	0.20	1.1	9/1/99	Any lead present is on the surface layer
V99C5426	School 162	497	5-6 yr Play Room		toy, block	Wood	Green	1.23	0.35	1.7	9/1/99	Any lead present is 2 layers deep
V99C5427	School 162	498	5-6 yr Play Room		toy, block	Wood	Blue	0.02	0.07	1.0	9/1/99	Any lead present is on the surface layer
V99C5428	School 162	499	5-6 yr Play Room		toy, block	Wood	Red	0.07	0.11	1.4	9/1/99	Any lead present is on the surface layer
V99C5429	School 162	500	5-6 yr Play Room		toy, block	Wood	Yellow	1.80	0.27	1.1	9/1/99	Any lead present is on the surface layer
V99C5430	School 162	501	5-6 yr Play Room	Cabinet		Wood	White	0.04	0.07	1.0	9/1/99	Any lead present is on the surface layer
V99C5431	School 162	502	5-6 yr Play Room		Baseboard	Wood	Brown	0.16	0.09	1.0	9/1/99	Any lead present is on the surface layer
V99C5432	School 141	503	Calibration					0.60	0.00	0.0	9/1/99	Any lead present is on the surface layer
V99C5433	School 141	504	2-3 yr Play Room	Wall		Plaster	White	0.00	0.01	1.3	9/1/99	No lead present
V99C5434	School 141	505	2-3 yr Play Room	Wall		Plaster	Green	0.08	0.11	2.1	9/1/99	Any lead present is 2 layers deep
V99C5435	School 141	506	2-3 yr Play Room	Window	Casing	Wood	White	0.16	0.16	3.5	9/1/99	Any lead present is 2 to 3 layers deep
V99C5436	School 141	507	2-3 yr Play Room	Window	Sash	Wood	White	0.11	0.09	2.2	9/1/99	Any lead present is 2 layers deep
V99C5437	School 141	508	2-3 yr Play Room	Door	Door	Wood	White	0.11	0.09	1.9	9/1/99	Any lead present is 2 layers deep
V99C5438	School 141	509	2-3 yr Play Room		Baseboard	Wood	Brown	0.32	0.14	2.2	9/1/99	Any lead present is 2 layers deep
V99C5439	School 141	510	2-3 yr Play Room		rocking horse	Wood	Brown	1.14	0.20	1.7	9/1/99	Any lead present is 2 layers deep
V99C5440	School 141	511	2-3 yr Play Room		rocking horse	Wood	Green	0.28	0.09	1.3	9/1/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5441	School 141	512	2-3 yr Play Room		rocking horse	Wood	White	0.03	0.07	1.1	9/1/99	Any lead present is on the surface layer
V99C5442	School 141	513	2-3 yr Play Room		bus	Wood	Yellow	1.01	0.14	1.1	9/1/99	Any lead present is on the surface layer
V99C5443	School 141	514	2-3 yr Play Room		bus	Wood	Black	0.03	0.07	1.0	9/1/99	Any lead present is on the surface layer
V99C5444	School 141	515	2-3 yr Play Room		Chair	Wood	Blue	0.07	0.13	2.1	9/1/99	Any lead present is 2 layers deep
V99C5445	School 141	516	2-3 yr Play Room	Cabinet	Shelf	Wood	White	0.08	0.08	1.6	9/1/99	Any lead present is on the surface layer
V99C5446	School 141	517	2-3 yr Play Room	Cabinet		Wood	White	0.07	0.14	2.4	9/1/99	Any lead present is 2 to 3 layers deep
V99C5447	School 141	518	2-3 yr Play Room	Cabinet		Wood	Red	0.00	0.01	1.0	9/1/99	No lead present
V99C5448	School 141	519	2-3 yr Play Room	Wall		Plaster	White	0.00	0.07	1.1	9/1/99	No lead present
V99C5449	School 141	520	2-3 yr Play Room	Wall		Plaster	Blue	0.07	0.11	2.5	9/1/99	Any lead present is 2 to 3 layers deep
V99C5450	School 141	521	2-3 yr Play Room	Wall	Baseboard	Wood	Orange	1.36	0.28	2.1	9/1/99	Any lead present is 2 layers deep
V99C5451	School 141	522	2-3 yr Play Room		toy, block	Wood	Yellow	0.00	0.01	1.0	9/1/99	No lead present
V99C5452	School 141	523	2-3 yr Play Room		toy, block	Wood	Red	0.00	0.13	1.0	9/1/99	No lead present
V99C5453	School 141	524	2-3 yr Play Room		toy, block	Wood	Yellow	0.28	0.20	1.0	9/1/99	Any lead present is on the surface layer
V99C5454	School 141	525	2-3 yr Play Room	Wall	Chair	Wood	Blue	0.07	0.26	2.1	9/1/99	Any lead present is 2 layers deep
V99C5455	School 141	526	2-3 yr Play Room		toy, truck	Wood	Orange	1.30	0.18	1.2	9/1/99	Any lead present is on the surface layer
V99C5456	School 141	527	2-3 yr Play Room		rocking horse	Wood	Yellow	3.27	0.53	1.6	9/1/99	Any lead present is on the surface layer
V99C5457	School 141	528	2-3 yr Play Room		toy, block	Wood	Red	0.53	0.25	2.6	9/1/99	Any lead present is 2 to 3 layers deep
V99C5458	School 141	529	2-3 yr Play Room	Window	Casing	Wood	White	0.13	0.10	2.2	9/1/99	Any lead present is 2 layers deep
V99C5459	School 141	530	2-3 yr Play Room	Window	Sash	Wood	White	0.12	0.10	2.5	9/1/99	Any lead present is 2 to 3 layers deep
V99C5460	School 141	531	3 yr Play Room	Floor		Plaster	White	0.00	0.01	1.0	9/1/99	No lead present
V99C5461	School 141	532	3 yr Play Room	Wall		Plaster	Green	0.17	0.14	3.1	9/1/99	Any lead present is 2 to 3 layers deep

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5462	School 141	533	3 yr Play Room		Baseboard	Wood	Orange	1.50	0.16	1.4	9/1/99	Any lead present is on the surface layer
V99C5463	School 141	534	3 yr Play Room		toy, block	Wood	Yellow	0.09	0.10	1.0	9/1/99	Any lead present is on the surface layer
V99C5464	School 141	535	3 yr Play Room		toy, block	Wood	Green	0.05	0.17	1.4	9/1/99	Any lead present is on the surface layer
V99C5465	School 141	536	3 yr Play Room		toy, block	Wood	Blue	1.07	0.18	1.5	9/1/99	Any lead present is on the surface layer
V99C5466	School 141	537	3 yr Play Room		toy, block	Wood	Red	0.10	0.15	1.3	9/1/99	Any lead present is on the surface layer
V99C5467	School 141	538	3 yr Play Room		toy, block	Wood	Blue	0.02	0.29	1.1	9/1/99	Any lead present is on the surface layer
V99C5468	School 141	539	3 yr Play Room	Window	Casing	Wood	White	0.09	0.15	1.4	9/1/99	Any lead present is on the surface layer
V99C5469	School 141	540	3 yr Play Room	Window	Sash	Wood	White	0.23	0.46	5.3	9/1/99	Any lead present is 4 to 5 layers deep
V99C5470	School 141	541	3 yr Play Room		toy, block	Wood	White	0.07	0.20	5.5	9/1/99	Any lead present is 4 to 5 layers deep
V99C5471	School 141	542	3 yr Play Room	Cabinet		Wood	White	0.10	0.25	1.3	9/1/99	Any lead present is on the surface layer
V99C5472	School 141	543	4 yr Play Room	Wall		Plaster	Other	0.01	0.02	1.0	9/1/99	Any lead present is on the surface layer
V99C5473	School 141	544	4 yr Play Room	Wall	Baseboard	Wood	Orange	0.85	0.13	1.3	9/1/99	Any lead present is on the surface layer
V99C5474	School 141	544	4 yr Play Room	Wall	Baseboard	Wood	Orange	0.85	0.13	1.3	9/1/99	Any lead present is on the surface layer
V99C5475	School 141	546	4 yr Play Room	Window	Casing	Wood	White	0.07	0.10	1.7	9/1/99	Any lead present is 2 layers deep
V99C5476	School 141	547	4 yr Play Room	Cabinet		Wood	Beige	0.33	0.17	1.0	9/1/99	Any lead present is on the surface layer
V99C5477	School 141	548	4 yr Play Room	Cabinet		Wood	Tan	0.19	0.11	1.0	9/1/99	Any lead present is on the surface layer
V99C5478	School 141	549	4 yr Play Room		toy, block	Wood	Red	0.01	0.19	1.0	9/1/99	Any lead present is on the surface layer
V99C5479	School 141	550	4 yr Play Room		toy, block	Wood	Yellow	0.00	0.01	1.0	9/1/99	No lead present
V99C5480	School 141	551	4 yr Play Room		toy, block	Wood	Yellow	1.54	0.27	1.1	9/1/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5481	School 141	552	4 yr Play Room		toy, block	Wood	Blue	0.06	0.46	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5482	School 141	553	4 yr Play Room		toy, block	Wood	Green	0.15	0.22	10.0	9/1/99	Any lead present is 4 to 5 layers deep
V99C5483	School 141	554		Stairs		Concrte	Yellow	2.21	0.31	1.3	9/1/99	Any lead present is on the surface layer
V99C5484	School 141	555		Stairs		Concrte	Pink	2.31	0.26	1.7	9/1/99	Any lead present is 2 layers deep
V99C5485	School 141	556		Stairs	Rail	Metal	Pink	0.18	0.24	2.0	9/1/99	Any lead present is 2 layers deep
V99C5486	School 141	557	4 yr Play Room	Wall		Plaster	White	0.01	0.08	1.6	9/1/99	Any lead present is on the surface layer
V99C5487	School 141	558	4 yr Play Room	Wall		Plaster	Green	0.03	0.05	1.1	9/1/99	Any lead present is on the surface layer
V99C5488	School 141	559	4 yr Play Room	Cabinet	Door-Out	Wood	White	0.20	0.23	3.8	9/1/99	Any lead present is 4 to 5 layers deep
V99C5489	School 141	560	4 yr Play Room		Baseboard	Wood	Brown	0.81	0.25	4.6	9/1/99	Any lead present is 4 to 5 layers deep
V99C5490	School 141	561	4 yr Play Room		toy, block	Wood	Blue	0.19	0.26	5.1	9/1/99	Any lead present is 4 to 5 layers deep
V99C5491	School 141	562	4 yr Play Room		toy, block	Wood	Blue	0.87	0.20	2.5	9/1/99	Any lead present is 2 to 3 layers deep
V99C5492	School 141	563	4 yr Play Room		Chair	Wood	Blue	0.03	0.25	1.5	9/1/99	Any lead present is on the surface layer
V99C5493	School 141	564	4 yr Play Room	Wall		Plaster	Green	0.10	0.10	2.2	9/1/99	Any lead present is 2 layers deep
V99C5494	School 141	565	4 yr Play Room	Wall	Baseboard	Wood	Brown	1.29	0.22	1.6	9/1/99	Any lead present is on the surface layer
V99C5495	School 141	566	4 yr Play Room		bed	Wood	Red	0.03	0.08	1.0	9/1/99	Any lead present is on the surface layer
V99C5496	School 141	567	4 yr Play Room		bed	Wood	Yellow	0.08	0.10	1.0	9/1/99	Any lead present is on the surface layer
V99C5497	School 141	568	4 yr Play Room	Window	Casing	Wood	White	0.07	0.07	2.6	9/1/99	Any lead present is 2 to 3 layers deep
V99C5498	School 141	569	4 yr Play Room	Window	Sash	Wood	White	0.14	0.09	1.9	9/1/99	Any lead present is 2 layers deep
V99C5499	School 141	570	4 yr Play Room		Chair	Wood	Blue	0.04	0.08	1.4	9/1/99	Any lead present is on the

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												surface layer
V99C5500	School 141	571	4 yr Play Room	Cabinet		Wood	White	0.05	0.07	1.7	9/1/99	Any lead present is 2 layers deep
V99C5501	School 141	572	4 yr Play Room		toy, block	Wood	Yellow	0.04	0.23	1.7	9/1/99	Any lead present is 2 layers deep
V99C5502	School 141	573	4 yr Play Room		toy, block	Wood	Blue	0.01	0.18	1.0	9/1/99	Any lead present is on the surface layer
V99C5503	School 141	574	4 yr Play Room		toy, block	Wood	Other	0.21	0.11	1.3	9/1/99	Any lead present is on the surface layer
V99C5504	School 141	575	4 yr Play Room		toy, block	Wood	Green	0.17	0.14	1.5	9/1/99	Any lead present is on the surface layer
V99C5505	School 141	576	Exterior	Playground Equipment		Metal	Yellow	4.14	1.96	2.0	9/1/99	Any lead present is 2 layers deep
V99C5506	School 141	577	Exterior	Playground Equipment		Metal	Blue	0.27	0.51	6.2	9/1/99	Any lead present is 4 to 5 layers deep
V99C5507	School 141	578	Exterior	Playground Equipment		Metal	Red	0.57	0.17	2.1	9/1/99	Any lead present is 2 layers deep.
V99C5508	School 141	579	Exterior	Playground Equipment		Metal	Green	0.46	0.18	1.6	9/1/99	Any lead present is on the surface layer
V99C5509	School 141	580	Exterior	Playground Equipment		Metal	Yellow	1.68	0.37	1.7	9/1/99	Any lead present is 2 layers deep
V99C5510	School 141	581	Exterior	Playground Equipment	tire	rubber	Black	0.03	0.30	2.2	9/1/99	Any lead present is 2 layers deep
V99C5511	School 141	582	Exterior	Playground Equipment	tire	rubber	Green	0.26	0.08	1.2	9/1/99	Any lead present is on the surface layer
V99C5512	School 141	583	Exterior	Playground Equipment	tire	rubber	Yellow	1.37	0.26	1.1	9/1/99	Any lead present is on the surface layer
V99C5513	School 141	584	Exterior	Playground Equipment		Metal	Red	3.72	0.59	2.5	9/1/99	Any lead present is 2 to 3 layers deep
V99C5514	School 141	585	6 yr PLay Room		toy, block	Metal	Blue	0.01	0.03	1.0	9/1/99	Any lead present is on the surface layer
V99C5515	School 141	586	6 yr PLay Room		toy, block	Metal	Yellow	0.63	0.16	1.1	9/1/99	Any lead present is on the surface layer
V99C5516	School 141	587	6 yr PLay Room		toy, block	Metal	Red	0.06	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5517	School 141	588	6 yr PLay Room	Cabinet		Wood	Yellow	0.06	0.13	1.1	9/1/99	Any lead present is on the surface layer

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5518	School 141	589	6 yr PLay Room		Chair	Wood	Blue	0.03	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5519	School 141	590	6 yr PLay Room	Window	Casing	Wood	White	0.06	0.44	2.5	9/1/99	Any lead present is 2 to 3 layers deep
V99C5520	School 141	591	6 yr PLay Room	Window	Sash	Wood	White	0.04	0.06	1.0	9/1/99	Any lead present is on the surface layer
V99C5521	School 141	592	6 yr PLay Room	Wall		Plaster	Blue	0.06	0.16	1.8	9/1/99	Any lead present is 2 layers deep
V99C5522	School 141	593	Music Room	Wall		Plaster	Other	0.09	0.17	2.6	9/1/99	Any lead present is 2 to 3 layers deep
V99C5523	School 141	594	Music Room		Radiator	Metal	White	0.27	0.29	4.4	9/1/99	Any lead present is 4 to 5 layers deep
V99C5524	School 141	595	Music Room		Chair	Metal	Other	0.26	0.09	1.2	9/1/99	Any lead present is on the surface layer
V99C5525	School 141	596	Music Room		Baseboard	Wood	Orange	0.32	0.07	1.1	9/1/99	Any lead present is on the surface layer
V99C5526	School 141	597	Music Room	Window	Casing	Wood	White	0.04	0.22	1.1	9/1/99	Any lead present is on the surface layer
V99C5527	School 141	598	Music Room	Window	Sash	Wood	White	0.29	0.44	6.9	9/1/99	Any lead present is 4 to 5 layers deep
V99C5528	School 141	599	5 yr Play Room	Bench		Wood	Yellow	>>5.0	1.00	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5529	School 141	600	5 yr Play Room		toy, table	Wood	Orange	4.16	1.94	1.3	9/1/99	Any lead present is on the surface layer
V99C5530	School 141	601	5 yr Play Room		toy, block	Wood	Yellow	0.41	0.09	1.0	9/1/99	Any lead present is on the surface layer
V99C5531	School 141	602	5 yr Play Room		toy, block	Wood	Yellow	0.26	0.17	1.4	9/1/99	Any lead present is on the surface layer
V99C5532	School 141	603	5 yr Play Room	Bench		Wood	Red	0.15	0.11	1.3	9/1/99	Any lead present is on the surface layer
V99C5533	School 141	604	5 yr Play Room		Chair	Wood	Tan	0.30	0.09	1.2	9/1/99	Any lead present is on the surface layer
V99C5534	School 141	605	5 yr Play Room		toy, block	Wood	Yellow	0.01	0.05	1.0	9/1/99	Any lead present is on the surface layer
V99C5535	School 141	606	Sports Room	Wall		Plaster	Beige	0.12	0.14	2.3	9/1/99	Any lead present is 2 to 3 layers deep
V99C5536	School 141	607	Sports Room	Bench		Wood	White	0.36	0.15	3.5	9/1/99	Any lead present is 2 to 3

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
												layers deep
V99C5537	School 141	608	Sports Room		Baseboard	Wood	Beige	0.95	0.20	1.8	9/1/99	Any lead present is 2 layers deep
V99C5538	School 141	609	Sports Room	Bench		Wood	Yellow	0.37	0.08	1.0	9/1/99	Any lead present is on the surface layer
V99C5539	School 141	610	Sports Room	Bench		Wood	Red	0.06	0.04	1.0	9/1/99	Any lead present is on the surface layer
V99C5540	School 141	611	Sports Room	Wall		Plaster	Yellow	0.23	0.14	1.8	9/1/99	Any lead present is 2 layers deep
V99C5541	School 141	612	Sports Room		ladder	Wood	Brown	0.00	0.14	1.0	9/1/99	No lead present
V99C5542	School 141	613	Sports Room		toy, block	Wood	Blue	0.16	0.22	7.8	9/1/99	Any lead present is 4 to 5 layers deep
V99C5543	School 141	614	Sports Room		toy, block	Wood	Pink	0.09	0.08	1.0	9/1/99	Any lead present is on the surface layer
V99C5544	School 141	615	Sports Room		toy, block	Wood	Green	0.07	0.17	1.7	9/1/99	Any lead present is 2 layers deep
V99C5545	School 141	616	Sports Room		toy, block	Wood	Yellow	0.47	0.11	1.1	9/1/99	Any lead present is on the surface layer
V99C5546	School 141	617	Sports Room		toy, block	Wood	Red	0.07	0.07	1.0	9/1/99	Any lead present is on the surface layer
V99C5547	School 141	618	Exterior	Wall		Wood	Green	0.16	0.13	1.3	9/1/99	Any lead present is on the surface layer
V99C5548	School 141	619	Exterior	Wall		Brick	Yellow	0.51	0.09	1.0	9/1/99	Any lead present is on the surface layer
V99C5549	Bldg 147 Apt 52	620	Calibration					0.61	0.00	0.0	9/2/99	Any lead present is on the surface layer
V99C5550	Bldg 147 Apt 52	621		floor		Wood	Brown	3.73	0.37	2.1	9/2/99	Any lead present is 2 layers deep
V99C5551	Bldg 147 Apt 52	622		Door	Casing	Wood	White	0.05	0.49	1.3	9/2/99	Any lead present is on the surface layer
V99C5552	Bldg 147 Apt 52	623		Door		Wood	White	0.04	0.17	1.0	9/2/99	Any lead present is on the surface layer
V99C5553	Bldg 147 Apt 52	624		floor		Other	Brown	1.35	0.24	1.4	9/2/99	Any lead present is on the surface layer
V99C5554	Bldg 147 Apt 52	625		Door		Wood	White	0.06	0.10	1.0	9/2/99	Any lead present is on the surface layer
V99C5555	Bldg 21/1	626	Calibration					0.61	0.00	0.0	9/2/99	Any lead present is on the

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
	Apt 46											surface layer
V99C5556	Bldg 21/1 Apt 46	627		Door		Wood	White	0.02	0.04	1.0	9/2/99	Any lead present is on the surface layer
V99C5557	Bldg 21/1 Apt 46	628		Window	Casing	Wood	White	0.05	0.03	1.0	9/2/99	Any lead present is on the surface layer
V99C5558	Bldg 21/1 Apt 46	629			Baseboard	Wood	Blue	0.02	0.13	1.0	9/2/99	Any lead present is on the surface layer
V99C5559	Military City #18	630	Calibration					0.61	0.00	0.0	9/2/99	Any lead present is on the surface layer
V99C5560	Military City #18	631			chair		Grey	0.01	0.18	1.0	9/2/99	Any lead present is on the surface layer
V99C5561	Military City #18	632			Baseboard	Wood	Brown	1.14	0.26	2.5	9/2/99	Any lead present is 2 to 3 layers deep
V99C5562	Military City #18	633		Door		Wood	Green	0.25	0.24	5.5	9/2/99	Any lead present is 4 to 5 layers deep
V99C5563	Military City #18	634			Radiator	Metal	Tan	0.06	0.22	1.9	9/2/99	Any lead present is 2 layers deep
V99C5564	Military City #18	635		Window	Casing	Wood	White	0.12	0.11	3.1	9/2/99	Any lead present is 2 to 3 layers deep
V99C5565	Military City #18	636		stove		Brick	Green	0.03	0.14	1.2	9/2/99	Any lead present is on the surface layer
V99C5566	Bldg 16 Apt 73	637	Calibration					0.60	0.00	0.0	9/2/99	Any lead present is on the surface layer
V99C5567	Bldg 16 Apt 73	638		floor			Orange	2.78	0.28	2.2	9/2/99	Any lead present is 2 layers deep
V99C5568	Bldg 16 Apt 73	639		floor			Orange	3.08	0.35	2.1	9/2/99	Any lead present is 2 layers deep
V99C5569	Bldg 16 Apt 73	640		floor			Orange	1.62	0.26	1.7	9/2/99	Any lead present is 2 layers deep
V99C5570	Bldg 16 Apt 73	641		Door		Wood	Pink	1.98	0.61	4.4	9/2/99	Any lead present is 4 to 5 layers deep
V99C5571	Bldg 16 Apt 73	642			Baseboard	Wood	Orange	0.01	0.14	1.0	9/2/99	Any lead present is on the surface layer
V99C5572	Bldg 16 Apt 73	643		Window	Casing	Wood	White	0.08	0.21	4.2	9/2/99	Any lead present is 4 to 5 layers deep
V99C5573	Bldg 16 Apt 73	644		Window		Wood	White	0.32	0.21	2.2	9/2/99	Any lead present is 2 layers deep

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5574	Bldg 16 Apt 73	645			stair rail	Wood	Yellow	0.63	0.14	1.3	9/2/99	Any lead present is on the surface layer
V99C5575	Bldg 16 Apt 73	646			stair rail	Metal	Yellow	0.51	0.19	1.3	9/2/99	Any lead present is on the surface layer
V99C5576	Bldg 16 Apt 73	647		Wall		concrete		0.09	0.08	1.0	9/2/99	Any lead present is on the surface layer
V99C5577	Bldg 6 Apt 65	648	Calibration					0.60	0.00	0.0	9/2/99	Any lead present is on the surface layer
V99C5578	Bldg 6 Apt 65	649		floor			Yellow	1.14	0.21	1.0	9/2/99	Any lead present is on the surface layer
V99C5579	Bldg 6 Apt 65	650		floor			Yellow	1.28	0.14	1.2	9/2/99	Any lead present is on the surface layer
V99C5580	Bldg 6 Apt 65	651		floor			Yellow	1.32	0.11	1.2	9/2/99	Any lead present is on the surface layer
V99C5581	Bldg 6 Apt 65	652		Door		Wood	White	0.27	0.12	1.5	9/2/99	Any lead present is on the surface layer
V99C5582	Bldg 6 Apt 65	653		Door	Casing	Wood	White	0.00	0.01	1.0	9/2/99	No lead present
V99C5583	Bldg 6 Apt 65	654			sink			0.01	0.10	1.3	9/2/99	Any lead present is on the surface layer
V99C5584	Bldg 6 Apt 65	655			Baseboard	Wood	Brown	0.13	0.16	1.6	9/2/99	Any lead present is on the surface layer
V99C5585	Bldg 6 Apt 65	656		Wall		Plaster	Green	0.24	0.33	2.8	9/2/99	Any lead present is 2 to 3 layers deep
V99C5586	Bldg 19/2 Apt 52	657	Calibration					0.61	0.00	0.0	9/2/99	Any lead present is on the surface layer
V99C5587	Bldg 19/2 Apt 52	658						0.01	0.14	1.7	9/2/99	Any lead present is 2 layers deep
V99C5588	Bldg 19/2 Apt 52	659						1.29	0.21	1.7	9/2/99	Any lead present is 2 layers deep
V99C5589	Bldg 19/2 Apt 52	660						0.76	0.17	1.9	9/2/99	Any lead present is 2 layers deep
V99C5590	Bldg 19/2 Apt 52	661						0.03	0.09	1.0	9/2/99	Any lead present is on the surface layer
V99C5591	Bldg 19/2 Apt 52	662						0.17	0.18	2.8	9/2/99	Any lead present is 2 to 3 layers deep
V99C5592	Bldg 40 Apt	663	Calibration					0.62	0.00	0.0	9/2/99	Any lead present is on the

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
	29											surface layer
V99C5593	Bldg 40 Apt 29	664		floor			Brown	3.14	0.25	1.7	9/2/99	Any lead present is 2 layers deep
V99C5594	Bldg 40 Apt 29	665			Baseboard		Brown	2.24	0.40	1.7	9/2/99	Any lead present is 2 layers deep
V99C5595	Bldg 40 Apt 29	666			Baseboard		Brown	3.13	0.56	2.7	9/2/99	Any lead present is 2 to 3 layers deep
V99C5596	Bldg 40 Apt 29	667		Wall		Plaster	Blue	0.05	0.10	1.2	9/2/99	Any lead present is on the surface layer
V99C5597	Bldg 40 Apt 29	668		Door		Wood	White	0.26	0.29	4.2	9/2/99	Any lead present is 4 to 5 layers deep
V99C5598	Bldg 40 Apt 29	669			stair rail		Brown	0.32	0.13	1.6	9/2/99	Any lead present is on the surface layer
V99C5599	Bldg 1a Apt 53	670	Calibration					0.62	0.00	0.0	9/2/99	Any lead present is on the surface layer
V99C5600	Bldg 1a Apt 53	671		floor			Yellow	2.41	0.22	1.9	9/2/99	Any lead present is 2 layers deep
V99C5601	Bldg 1a Apt 53	672		Wall		Plaster	other	0.17	0.13	2.3	9/2/99	Any lead present is 2 to 3 layers deep
V99C5602	Bldg 1a Apt 53	673		Window	Casing	Wood	White	0.19	0.14	2.3	9/2/99	Any lead present is 2 to 3 layers deep
V99C5603	Bldg 1a Apt 53	674		Door	Casing	Wood	Pink	0.14	0.09	1.3	9/2/99	Any lead present is on the surface layer
V99C5604	Bldg 1a Apt 53	675			Baseboard	Wood	Blue	0.29	0.14	1.4	9/2/99	Any lead present is on the surface layer
V99C5605	Bldg 1a Apt 53	676		floor			Yellow	3.72	0.46	1.9	9/2/99	Any lead present is 2 layers deep
V99C5606	Bldg 1a Apt 53	677		floor			Yellow	2.93	0.31	1.3	9/2/99	Any lead present is on the surface layer
V99C5607	Bldg 3 Apt 85	678	Calibration					0.61	0.00	0.0	9/2/99	Any lead present is on the surface layer
V99C5608	Bldg 3 Apt 85	679		Door	Jamb	Wood	Yellow	1.35	0.23	1.2	9/2/99	Any lead present is on the surface layer
V99C5609	Bldg 3 Apt 85	680		floor			other	2.05	0.23	1.5	9/2/99	Any lead present is on the surface layer
V99C5610	Bldg 3 Apt 85	681		floor			other	1.60	0.29	1.5	9/2/99	Any lead present is on the surface layer

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5611	Bldg 3 Apt 85	682		Window	Casing	Wood	White	0.14	0.15	2.6	9/2/99	Any lead present is 2 to 3 layers deep
V99C5612	Bldg 3 Apt 85	683		Window		Wood	White	0.03	0.07	1.0	9/2/99	Any lead present is on the surface layer
V99C5613	Bldg 44 Apt 28	684	Calibration					0.62	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5614	Bldg 44 Apt 28	685			Baseboard	Wood	Orange	>>5.0	1.00	2.2	9/3/99	Any lead present is 2 layers deep
V99C5615	Bldg 44 Apt 28	686		floor			Orange	>>5.0	1.00	2.2	9/3/99	Any lead present is 2 layers deep
V99C5616	Bldg 44 Apt 28	687		floor			Orange	>>5.0	1.00	3.6	9/3/99	Any lead present is 2 to 3 layers deep
V99C5617	Bldg 44 Apt 28	688		floor			Yellow	3.86	0.45	1.4	9/3/99	Any lead present is on the surface layer
V99C5618	Bldg 44 Apt 28	689		Door	Casing	Wood	White	0.35	0.39	4.5	9/3/99	Any lead present is 4 to 5 layers deep
V99C5619	Bldg 44 Apt 28	690		Window	Casing	Wood	White	0.12	0.11	1.8	9/3/99	Any lead present is 2 layers deep
V99C5620	Bldg 44 Apt 28	691		Wall		Plaster	other	0.01	0.14	1.2	9/3/99	Any lead present is on the surface layer
V99C5621	Bldg 44 Apt 28	692		cabinet				0.00	0.02	1.0	9/3/99	No lead present
V99C5622	Bldg 53/1 Apt 20	693	Calibration					0.61	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5623	Bldg 53/1 Apt 20	694			Baseboard	Wood	Orange	0.13	0.10	1.0	9/3/99	Any lead present is on the surface layer
V99C5624	Bldg 53/1 Apt 20	695			Baseboard	Wood	Orange	0.10	0.03	1.0	9/3/99	Any lead present is on the surface layer
V99C5625	Bldg 53/1 Apt 20	696		Wall		Plaster	other	0.00	0.14	1.0	9/3/99	No lead present
V99C5626	Bldg 53/1 Apt 20	697		Door	Casing	Wood	other	0.00	0.01	1.0	9/3/99	No lead present
V99C5627	Bldg 53/1 Apt 20	698		Window	Casing	Wood	White	0.07	0.09	1.4	9/3/99	Any lead present is on the surface layer
V99C5628	Bldg 53/1 Apt 20	699			toy, block	Wood	Yellow	0.91	0.18	1.1	9/3/99	Any lead present is on the surface layer
V99C5629	Bldg 26 Apt	700	Calibration					0.62	0.00	0.0	9/3/99	Any lead present is on the

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Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
	118											surface layer
V99C5630	Bldg 26 Apt 118	701		floor			Orange	1.15	0.23	2.2	9/3/99	Any lead present is 2 layers deep
V99C5631	Bldg 26 Apt 118	702		floor			Yellow	1.17	0.18	1.3	9/3/99	Any lead present is on the surface layer
V99C5632	Bldg 26 Apt 118	703		Wall		Wood	Green	0.03	0.09	1.3	9/3/99	Any lead present is on the surface layer
V99C5633	Bldg 26 Apt 118	704					red	0.64	0.19	1.8	9/3/99	Any lead present is 2 layers deep
V99C5634	Bldg 26 Apt 118	705		Window	Casing	Wood	White	0.00	0.06	1.0	9/3/99	No lead present
V99C5635	Bldg 26 Apt 118	706		Window		Wood	White	0.01	0.17	1.0	9/3/99	Any lead present is on the surface layer
V99C5636	Bldg 10 Apt 105	707	Calibration					0.62	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5637	Bldg 10 Apt 105	708		floor			Orange	0.17	0.09	1.2	9/3/99	Any lead present is on the surface layer
V99C5638	Bldg 10 Apt 105	709		Wall		Plaster	White	0.01	0.07	4.0	9/3/99	Any lead present is 4 to 5 layers deep
V99C5639	Bldg 10 Apt 105	710		Door	Casing	Wood	Green	0.03	0.35	1.2	9/3/99	Any lead present is on the surface layer
V99C5640	Bldg 10 Apt 105	711		Door		Wood		0.12	0.12	1.0	9/3/99	Any lead present is on the surface layer
V99C5641	Bldg 10 Apt 105	712		Window	Casing	Wood		0.09	0.16	1.8	9/3/99	Any lead present is 2 layers deep
V99C5642	Bldg 10 Apt 105	713		Window				0.29	0.10	1.5	9/3/99	Any lead present is on the surface layer
V99C5643	Bldg 10 Apt 105	714		Wall		Plaster	blue	0.02	0.21	1.0	9/3/99	Any lead present is on the surface layer
V99C5644	Bldg 43 Apt 10	715	Calibration					0.60	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5645	Bldg 43 Apt 10	716		Wall		Plaster		0.00	0.08	1.0	9/3/99	No lead present
V99C5646	Bldg 43 Apt 10	717		Door		Wood	White	0.97	0.21	1.5	9/3/99	Any lead present is on the surface layer
V99C5647	Bldg 43 Apt 10	718		floor			Yellow	>>5.0	1.00	2.0	9/3/99	Any lead present is 2 layers deep

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5648	Bldg 43 Apt 10	719			Baseboard	Wood	Yellow	0.68	0.15	1.3	9/3/99	Any lead present is on the surface layer
V99C5649	Bldg 43 Apt 10	720		floor			Yellow	>>5.0	1.00	1.7	9/3/99	Any lead present is 2 layers deep
V99C5650	Bldg 43 Apt 10	721		Door		Wood	White	0.12	0.11	1.7	9/3/99	Any lead present is 2 layers deep
V99C5651	Bldg 43 Apt 10	722		Window	Casing	Wood	White	0.15	0.14	2.2	9/3/99	Any lead present is 2 layers deep
V99C5652	Bldg 26 Apt 72	723	Calibration					0.61	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5653	Bldg 26 Apt 72	724			Baseboard	Wood	Orange	0.61	0.17	1.4	9/3/99	Any lead present is on the surface layer
V99C5654	Bldg 26 Apt 72	725		Wall		Plaster	other	0.00	0.07	1.0	9/3/99	No lead present
V99C5655	Bldg 26 Apt 72	726		Window	Casing	Wood	White	0.26	0.19	3.1	9/3/99	Any lead present is 2 to 3 layers deep
V99C5656	Bldg 5 Apt 22	727	Calibration					0.61	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5657	Bldg 5 Apt 22	728			table	Wood	other	0.70	0.12	1.0	9/3/99	Any lead present is on the surface layer
V99C5658	Bldg 5 Apt 22	729		Door	Casing	Wood		0.11	0.11	1.9	9/3/99	Any lead present is 2 layers deep
V99C5659	Bldg 5 Apt 22	730			bicycle	Metal	black	0.17	0.05	1.0	9/3/99	Any lead present is on the surface layer
V99C5660	Bldg 5 Apt 22	731		Window	Casing	Wood	White	0.07	0.09	1.9	9/3/99	Any lead present is 2 layers deep
V99C5661	Bldg 5 Apt 22	732			Baseboard	Wood		3.62	0.70	2.5	9/3/99	Any lead present is 2 to 3 layers deep
V99C5662	Bldg 5 Apt 22	733		Door				0.02	0.03	1.0	9/3/99	Any lead present is on the surface layer
V99C5663	Bldg 15 Apt 123	734	Calibration					0.60	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5664	Bldg 15 Apt 123	735			Baseboard	Wood	Yellow	>>5.0	1.00	1.5	9/3/99	Any lead present is on the surface layer
V99C5665	Bldg 15 Apt 123	736		Door		Wood	Green	0.18	0.12	1.8	9/3/99	Any lead present is 2 layers deep
V99C5666	Bldg 15 Apt	737		floor			Yellow	1.53	0.18	1.2	9/3/99	Any lead present is on the

Vladivostok Ecology Project: Surface Testing Results

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
	123											surface layer
V99C5667	Bldg 15 Apt 123	738			Baseboard	Wood	Yellow	2.90	0.29	1.6	9/3/99	Any lead present is on the surface layer
V99C5668	Bldg 15 Apt 123	739		Door		Wood	White	0.09	0.10	1.7	9/3/99	Any lead present is 2 layers deep
V99C5669		740	Calibration					0.61	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5670		741	Calibration					0.60	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5671	Bldg 23 Apt 134	742		Door	Casing	Wood	White	0.09	0.10	2.0	9/3/99	Any lead present is 2 layers deep
V99C5672	Bldg 23 Apt 134	743		floor			Yellow	2.53	0.47	2.9	9/3/99	Any lead present is 2 to 3 layers deep
V99C5673	Bldg 23 Apt 134	744		floor			Orange	2.15	0.25	3.4	9/3/99	Any lead present is 2 to 3 layers deep
V99C5674	Bldg 23 Apt 134	745			Baseboard	Wood		3.40	0.55	3.3	9/3/99	Any lead present is 2 to 3 layers deep
V99C5675	Bldg 23 Apt 134	746		Window	Casing	Wood	White	0.20	0.47	5.0	9/3/99	Any lead present is 4 to 5 layers deep
V99C5676	Bldg 23 Apt 134	747			Baseboard	Wood	brown	2.21	0.35	2.8	9/3/99	Any lead present is 2 to 3 layers deep
V99C5677	Bldg 39 Apt 8	748	Calibration					0.60	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5678	Bldg 39 Apt 8	749		floor			Yellow	0.80	0.17	1.5	9/3/99	Any lead present is on the surface layer
V99C5679	Bldg 39 Apt 8	750		floor			Yellow	0.81	0.18	1.6	9/3/99	Any lead present is on the surface layer
V99C5680	Bldg 39 Apt 8	751		Door		Wood	White	0.23	0.70	4.2	9/3/99	Any lead present is 4 to 5 layers deep
V99C5681	Bldg 39 Apt 8	752		Wall		Plaster	pink	0.00	0.06	1.0	9/3/99	No lead present
V99C5682	Bldg 39 Apt 8	753		Window	Casing	Wood	White	0.06	0.08	1.8	9/3/99	Any lead present is 2 layers deep
V99C5683	Bldg 39 Apt 8	754		floor	hallway		red	0.02	0.06	6.8	9/3/99	Any lead present is 4 to 5 layers deep
V99C5684	Bldg 39 Apt 8	755		floor	hallway		blue	0.23	0.11	1.7	9/3/99	Any lead present is 2 layers deep

Vladivostok Ecology Project: Surface Testing Results

Number	Site	XL #	Room	Structure	Feature	Substrate	Color	PbL (mg/cm²)	± (mg/cm²)	Depth Index	Date	Note
V99C5685	Bldg 9 Apt 29	756	Calibration					0.61	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5686	Bldg 9 Apt 29	757		Wall		Plaster	other	0.05	0.17	1.2	9/3/99	Any lead present is on the surface layer
V99C5687	Bldg 9 Apt 29	759		floor	closet		Yellow	3.45	0.44	1.2	9/3/99	Any lead present is on the surface layer
V99C5688	Bldg 9 Apt 29	760			Baseboard	Wood	Yellow	3.15	1.21	1.9	9/3/99	Any lead present is 2 layers deep
V99C5689	Bldg 9 Apt 29	761			Baseboard	Wood	Yellow	3.14	0.36	2.0	9/3/99	Any lead present is 2 layers deep
V99C5690	Bldg 56 Apt 942	762	Calibration					0.60	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5691	Bldg 56 Apt 942	763			Baseboard			0.53	0.14	1.2	9/3/99	Any lead present is on the surface layer
V99C5692	Bldg 56 Apt 942	764		Door	Casing	Wood	White	0.18	0.19	3.3	9/3/99	Any lead present is 2 to 3 layers deep
V99C5693	Bldg 56 Apt 942	765		Wall		Plaster	other	0.00	0.01	1.0	9/3/99	No lead present
V99C5694	Bldg 56 Apt 942	766		Window	Casing	Wood		0.15	0.10	2.3	9/3/99	Any lead present is 2 to 3 layers deep
V99C5695	Bldg 11 Apt 323	767	Calibration					0.61	0.00	0.0	9/3/99	Any lead present is on the surface layer
V99C5696	Bldg 11 Apt 323	768			Baseboard	Wood	Yellow	1.28	0.14	1.3	9/3/99	Any lead present is on the surface layer
V99C5697	Bldg 11 Apt 323	769		Door		Wood	White	0.02	0.02	1.0	9/3/99	Any lead present is on the surface layer
V99C5698	Bldg 11 Apt 323	770		floor			Yellow	1.16	0.25	1.5	9/3/99	Any lead present is on the surface layer
V99C5699	Bldg 11 Apt 323	771		Wall			other	0.08	0.30	10.0	9/3/99	Any lead present is 4 to 5 layers deep
V99C5700	Bldg 11 Apt 323	772		Window	Casing	Wood		0.56	0.18	1.1	9/3/99	Any lead present is on the surface layer

Vladivostok Ecology Project: Blood-Lead Screening Results

CDC	TEAM ID#	Sample	Result	RESULT (US)	Age	NOTES		
169	V99B0001	1001	3,6	3.6	6			
169	V99B0002	1002	3,7	3.7	6			
169	V99B0003	1003	14,0	14.0	7			
169	V99B0004	1004	4,0	4.0	6			
169	V99B0005	1005	3,3	3.3	6			
169	V99B0006	1006	5,0	5.0	6			
169	V99B0007	1007	3,8	3.8	5			
169	V99B0008	1008	2,4	2.4	6			
169	V99B0009	1009	6,5	6.5	6			
169	V99B0010	1010	2,0	2.0	6			
169	V99B0011	1011	14,6	14.6	6			
169	V99B0012	1012	4,4	4.4	6			
169	V99B0013	1013	6,9	6.9	6			
169	V99B0014	1014	6,8	6.8	7			
169	V99B0015	1015	4,0	4.0	5			
169	V99B0016	1016	5,3	5.3	6			
169	V99B0017	1017	8,0	8.0	6			
169	V99B0018	1018	6,5	6.5	6			
169	V99B0019	1019	6,0	6.0	6			
169	V99B0020	1020	4,2	4.2	6			
169	V99B0021	1021	3,0	3.0	6			
169	V99B0022	1022	3,6	3.6	6			
169	V99B0023	1023	2,5	2.5	6			
169	V99B0024	1024	12,0	12.0	7			
169	V99B0025	1025	3,2	3.2	6			
169	V99B0026	1026	4,7	4.7	5			
169	V99B0027	1027	5,1	5.1	6			
169	V99B0028	1028	4,7	4.7	6			
169	V99B0029	1029	12,8	12.8	3			
169	V99B0030	1030	10,0	10.0	6			
169	V99B0031	1031	5,3	5.3	6			
169	V99B0032	1032	8,7	8.7	6			
169	V99B0033	1033	4,8	4.8	6			
169	V99B0034	1034	6,0	6.0	6			

Vladivostok Ecology Project: Blood-Lead Screening Results

CDC	TEAM ID#	Sample	Result	RESULT (US)	Age	NOTES		
169	V99B0035	1035	5,9	5.9	6			
169	V99B0036	1036	3,3	3.3	6			
169	V99B0037	1037	3,5	3.5	6			
169	V99B0038	1038	6,4	6.4	6			
169	V99B0039	1039	5,1	5.1	6			
169	V99B0040	1040	3,3	3.3	6			
169	V99B0041	1041	5,5	5.5	6			
169	V99B0042	1042	3,9	3.9	5			
169	V99B0043	1043	5,3	5.3	5			
169	V99B0044	1044	16,0	16.0	6	6>US	12.8%	
169	V99B0045	1045	5,5	5.5	6	8>Russia	17.0%	
169	V99B0046	1046	3,2	3.2	6	MEAN #169		
169	V99B0047	1047	1,3	1.3	6	5.7	Std Dev	3.3
18	V99B0048	1048	13,7	13.7	5			
18	V99B0049	1049	6,7	6.7	5			
18	V99B0050	1050	4,3	4.3	5			
18	V99B0051	1051	7,7	7.7	5			
18	V99B0052	1052	5,7	5.7	5			
18	V99B0053	1053	4,6	3.6	5			
18	V99B0054	1054	5,1	5.1	4			
18	V99B0055	1055	1,8	1.8	4			
18	V99B0056	1056	5,1	5.1	6			
18	V99B0057	1057	0,4	0.4	5			
18	V99B0058	1058	6,3	6.3	6			
18	V99B0059	1059	0,3	0.3	6			
18	V99B0060	1060	2,3	2.3	6			
18	V99B0061	1061	3,1	3.1	6			
18	V99B0062	1062	5,3	5.3	4			
18	V99B0063	1063	2,7	2.7	5			
18	V99B0064	1064	11,9	11.9	6	2>US	10.0%	
18	V99B0065	1065	1,6	1.6	6	2>Russia	10.0%	
18	V99B0066	1066	6,6	6.6	6	MEAN #18		
18	V99B0067	1067	1,1	1.1	7	4.8	Std Dev	3.5

Vladivostok Ecology Project: Blood-Lead Screening Results

CDC	TEAM ID#	Sample	Result	RESULT (US)	Age	NOTES		
141	V99B0068	1068	9,0	9.0	5			
141	V99B0069	1069	2,2	2.2	5			
141	V99B0070	1070	5,3	5.3	5			
141	V99B0071	1071	12,6	12.6	5			
141	V99B0072	1072	12,2	12.2	5			
141	V99B0073	1073	3,5	3.5	6			
141	V99B0074	1074	3,7	3.7	5			
141	V99B0075	1075	5,3	5.3	6			
141	V99B0076	1076	1,6	1.6	5			
141	V99B0077	1077	4,7	4.7	5			
141	V99B0078	1078	15,1	15.1	5			
141	V99B0079	1079	5,1	5.1	6			
141	V99B0080	1080	12,4	12.4	7			
141	V99B0081	1081	4,4	4.4	7			
141	V99B0082	1082	3,0	3.0	6			
141	V99B0083	1083	17,0	17.0	6			
141	V99B0084	1084	11,2	11.2	6			
141	V99B0085	1085	7,2	7.2	6			
141	V99B0086	1086	11,2	11.2	6			
141	V99B0087	1087	11,8	11.8	6			
141	V99B0088	1088	9,2	9.2	6			
141	V99B0089	1089	10,4	10.4	6			
141	V99B0090	1090	5,1	5.1	6			
141	V99B0091	1091	6,7	6.7	6			
141	V99B0092	1092	10,2	10.2	4			
141	V99B0093	1093	6,4	6.4	5			
141	V99B0094	1094	7,5	7.5	5			
141	V99B0095	1095	5,6	5.6	7			
141	V99B0096	1096	7,8	7.8	6			
141	V99B0097	1097	6,2	6.2	5			
141	V99B0098	1098	7,3	7.3	5			
141	V99B0099	1099	6,7	6.7	6	11>US	31.4%	
141	V99B0100	1100	5,7	5.7	5	13>Russia	37.1%	
141	V99B0101	1101	5,6	5.6	5	MEAN #141		

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CDC	TEAM ID#	Sample	Result	RESULT (US)	Age	NOTES		
141	V99B0102	1102	9,8	9.8	4	7.7	Std Dev	3.7
132	V99B0103	1103	8,8	8.8	6			
132	V99B0104	1104	2,7	2.7	6			
132	V99B0105	1105	3,7	3.7	6			
132	V99B0106	1106	4,0	4.0	6			
132	V99B0107	1107	3,0	3.0	6			
132	V99B0108	1108	8,4	8.4	5			
132	V99B0109	1109	7,3	7.3	6			
132	V99B0110	1110	17,6	17.6	6			
132	V99B0111	1111	6,2	6.2	6			
132	V99B0112	1112	5,1	5.1	6			
132	V99B0113	1113	3,8	3.8	6			
132	V99B0114	1114	8,3	8.3	6			
132	V99B0115	1115	1,7	1.7	7			
132	V99B0116	1116	4,4	4.4	6			
132	V99B0117	1117	0,2	0.2	6			
132	V99B0118	1118	7,1	7.1	6			
132	V99B0119	1119	5,1	5.1	7			
132	V99B0120	1120	1,0	1.0	6			
132	V99B0121	1121	1,8	1.8	5			
132	V99B0122	1122	1,1	1.1	6			
132	V99B0123	1123	0,2	0.2	6			
132	V99B0124	1124	0,4	0.4	6			
132	V99B0125	1125	6,4	6.4	6	1>US	3.8%	
132	V99B0126	1126	2,1	2.1	6	4>Russia	15.4%	
132	V99B0127	1127	2,8	2.8	6	MEAN #132		
132	V99B0128	1128	4,8	4.8	7	4.5	Std Dev	3.7
109	V99B0129	1129	5,1	5.1	6			
109	V99B0130	1130	6,0	6.0	6			
109	V99B0131	1131	7,7	7.7	5			
109	V99B0132	1132	6,0	6.0	5			
109	V99B0133	1133	4,5	4.5	5			

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CDC	TEAM ID#	Sample	Result	RESULT (US)	Age	NOTES		
109	V99B0134	1134	11,9	11.9	4			
109	V99B0135	1135	12,2	12.2	5			
109	V99B0136	1136	5,2	5.2	5			
109	V99B0137	1137	8,3	8.3	4			
109	V99B0138	1138	4,6	4.6	4			
109	V99B0139	1139	6,1	6.1	4			
109	V99B0140	1140	3,2	3.2	5			
109	V99B0141	1141	9,6	9.6	5			
109	V99B0142	1142	5,6	5.6	5			
109	V99B0143	1143	5,1	5.1	6			
109	V99B0144	1144	18,0	18.0	4			
109	V99B0145	1145	5,8	5.8	4			
109	V99B0146	1146	6,6	6.6	6			
109	V99B0147	1147	9,4	9.4	5			
109	V99B0148	1148	4,1	4.1	5			
109	V99B0149	1149	3,0	3.0	5			
109	V99B0150	1150	13,5	13.5	5			
109	V99B0151	1151	7,3	7.3	5			
109	V99B0152	1152	6,4	6.4	5			
109	V99B0153	1153	7,6	7.6	5			
109	V99B0154	1154	4,4	4.4	5			
109	V99B0155	1155	5,1	5.1	6			
109	V99B0156	1156	7,0	7.0	5			
109	V99B0157	1157	6,0	6.0	5			
109	V99B0158	1158	3,7	3.7	5			
109	V99B0159	1159	8,1	8.1	4			
109	V99B0160	1160	5,7	5.7	4			
109	V99B0161	1161	5,8	5.8	4			
109	V99B0162	1162	6,5	6.5	4			
109	V99B0163	1163	5,6	5.6	4			
109	V99B0164	1164	6,8	6.8	4			
109	V99B0165	1165	6,2	6.2	4			
109	V99B0166	1166	8,2	8.2	4			
109	V99B0167	1167	8,4	8.4	5			

Vladivostok Ecology Project: Blood-Lead Screening Results

CDC	TEAM ID#	Sample	Result	RESULT (US)	Age	NOTES		
109	V99B0168	1168	6,0	6.0	4			
109	V99B0169	1169	12,5	12.5	4			
109	V99B0170	1170	6,7	6.7	4	7>US	15.5%	
109	V99B0171	1171	11,4	11.4	4	13>Russia	28.9%	
109	V99B0172	1172	4,7	4.7	4	MEAN #109		
109	V99B0173	1173	18,0	18.0	7	7.3	Std Dev	3.4
162	V99B0174	1174	17,4	17.4	9			
162	V99B0175	1175	24,1	24.1	10			
162	V99B0176	1176	18,0	18.0	7			
162	V99B0177	1177	4,7	4.7	7			
162	V99B0178	1178	20,4	20.4	6			
162	V99B0179	1179	8,6	8.6	6			
162	V99B0180	1180	7,6	7.6	6			
162	V99B0181	1181	11,2	11.2	6			
162	V99B0182	1182	5,3	5.3	6			
162	V99B0183	1183	13,6	13.6	6			
162	V99B0184	1184	4,7	4.7	6			
162	V99B0185	1185	2,8	2.8	6			
162	V99B0186	1186	17,1	17.1	7			
162	V99B0187	1187	8,4	8.4	6			
162	V99B0188	1188	13,6	13.6	7			
162	V99B0189	1189	28,0	28.0	4			
162	V99B0190	1190	3,8	3.8	4			
162	V99B0191	1191	16,3	16.3	4			
162	V99B0192	1192	4,6	4.6	3			
162	V99B0193	1193	7,2	7.2	4			
162	V99B0194	1194	1,7	1.7	3			
162	V99B0195	1195	3,1	3.1	4			
162	V99B0196	1196	3,8	3.8	3			
162	V99B0197	1197	10,5	10.5	4			
162	V99B0198	1198	9,1	9.1	4			
162	V99B0199	1199	6,1	6.1	4			
162	V99B0200	1200	2,4	2.4	4	13>US	40.0%	

Vladivostok Ecology Project: Blood-Lead Screening Results

CDC	TEAM ID#	Sample	Result	RESULT (US)	Age	NOTES		
162	V99B0201	1201	1,0	1.0	4	16>Russia	50.0%	
162	V99B0202	1202	5,0	5.0	4	MEAN #162		
162	V99B0203	1203	25,0	25.0	4	10.2	StdDev	7.5
			MEAN	**6.8**				
			STDDEV	**4.640245023**		**39>US**	**19.2%**	**Percent**
			MAX	**28.0**		**55>Russia**	**27.1%**	**Percent**
			MIN	**0.2**				

LEAD SURVEY QUESTIONNAIRE

1. Study identification number _____

2. Child's name (last, first) _____

3. Child's age (years) _____

4. Male ☐ Female ☐

5. Ethnic background

   ☐ Russian ☐ Korean

   ☐ Other _____

6. Height _____ Weight _____

7. Blood Lead Level on first screen _____

   Follow-ups _____

   Follow-ups _____

8. Kindergarten _____

9. How many hours per week does your child spend at the kindergarten?

   ☐ <10

   ☐ 11-20

   ☐ 21-30

   ☐ 31-40

   ☐ >40

10. How far is the kindergarten playground from the road? _____

11. Home address and number _____

_____

12. How many hours per week spent inside the home?

LEAD SURVEY QUESTIONNAIRE

☐ <70
☐ 71-84

☐ 85-98

☐ 99-112

☐ 113-126

☐ 127-140

☐ >141

13. Where does your child play outdoors? _____

14. How far is the road from where your child plays? _____

15. How many hours per week does your child spend playing outside? _____

16. What toys does your child play with? any painted toys? _____

17. How many adults live in the home? _____

18. What is the father's occupation? _____

19. What is the mother's occupation? _____

20. What is the occupation of other adults living in the home? _____

_____

21. What is the source of water? ☐ Faucet ☐ Bottled

Brand _____

22. What is the source of produce? _____

23. What is the typical diet? _____

24. What major illnesses does the child have? _____

25. What type eating utensils are used and where were they obtained? _____

_____

LEAD SURVEY QUESTIONNAIRE

26. What type cooking utensils are used and where were they obtained? _____

_____

27. Have there been any repairs or remodeling done within the home? ☐ No ☐ Yes if yes please explain. _____

28. Was a source of lead found in the kindergarten? ☐ No ☐ Yes If yes, where?

_____

29. Was a source of lead found at the home? ☐ No ☐ Yes If yes, where?

_____

30. Was a source of lead found in the playground? ☐ No ☐ Yes If yes, where?

_____

31. Does your child stay/play at other locations besides the home (other relatives or friends)?

_____

32. What hobbies do the parents or other adults living in the home have or what work is done in the home that might be a source of lead? _____

Each child with high blood levels (BLL) and 2 other children with normal BLLs from the same kindergarten should have a completed questionnaire

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